

Benchmark 1:  
Northeast bolt on fire hydrant in the southwest quadrant of Stolp Avenue and Downer Place. Approximately Sta. 111+60 ±34' Rt. southwest of centerline of Downer Place and ±37' of the centerline of Stolp Avenue. Elevation: 638.31 (NAVD 88)

Benchmark 2:  
Bolt on top flange of fire hydrant labeled "Bury" located in front of the "Grand Army of the Republic" (G.A.R.) building at the southwest quadrant of the intersection of Downer Place and the Fox River on the East side of the Island. Approximately Sta. 114+84, ±36'Rt. of the centerline of Downer Place. Elevation: 638.09 (NAVD 88)

Existing Structure:  
SN 045-6005 constructed circa 1910 as a three span cast-in-place concrete closed spandrel arch with an out-to-out width of 63'-11 1/2" and a total length of 171'-1 1/2". The existing arch is to be removed and replaced with a PPC Deck beam superstructure on built up piers and abutments. The existing foundations will be re-used.

Salvage lightpoles adjacent to curb and deliver to City Electric Yard.

**DESIGN STRESSES**

**FIELD UNITS**

f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)

**PRECAST PRESTRESSED UNITS**

f'c = 6,000 psi  
f'ci = 5,000 psi  
fpu = 270,000 psi (1/2" φ low lax. strands)  
fpbt = 201,960 psi (1/2" φ low lax. strands)

**LOADING HL-93**

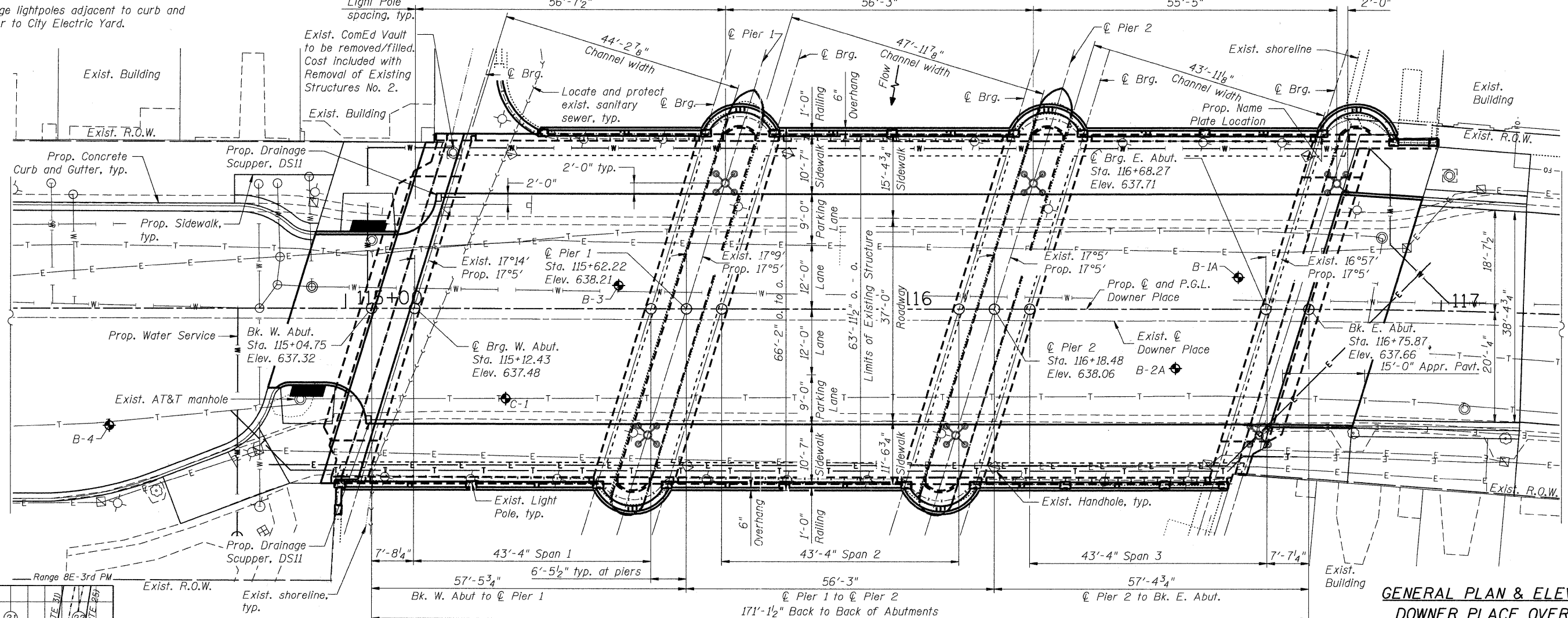
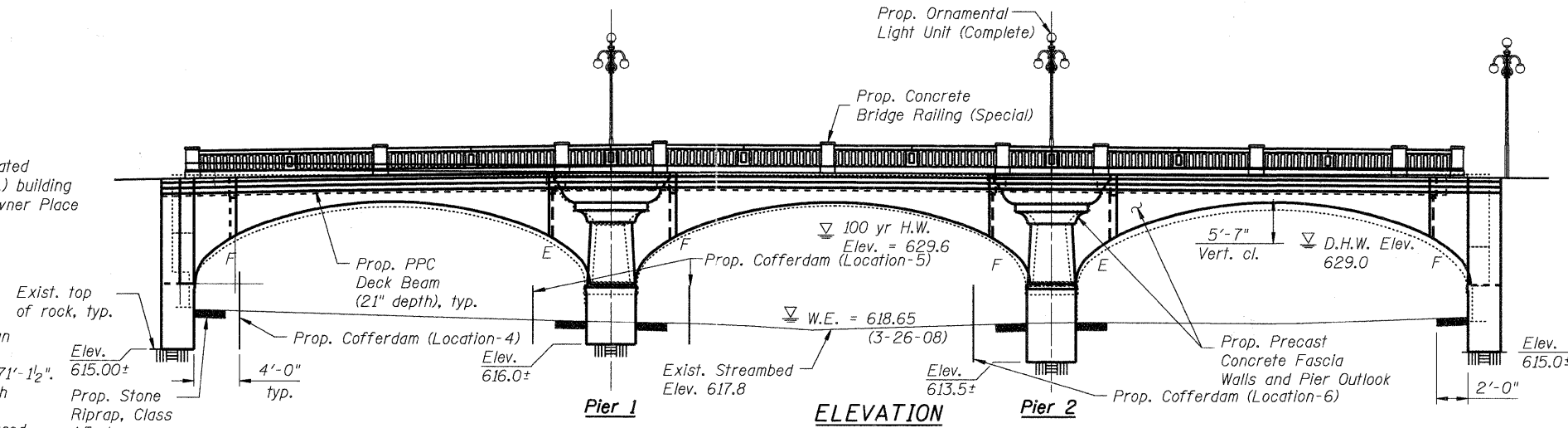
Allow 50#/sq. ft. for future wearing surface.

**DESIGN SPECIFICATIONS**

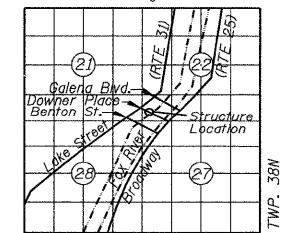
2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. (S<sub>D1</sub>) = .038g  
Design Spectral Acceleration at 0.2 sec. (S<sub>Ds</sub>) = .103g  
Soil Site Class = B



**LOCATION SKETCH**



**PLAN**  
See SE-3 for utility legend.

To the best of my knowledge, information and belief, this bridge 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 LRFD Bridge Design Specifications".

*Robert Stoe* 7/1/2011  
Date  
Structural Engineer  
HR Green Inc.



**GENERAL PLAN & ELEVATION  
DOWNER PLACE OVER THE  
EAST BRANCH OF THE FOX RIVER  
PUBLIC WATER  
SECTION NO. 07-00264-00-BR  
KANE COUNTY  
STATION 115+90.31  
STRUCTURE NO. 045-6005**

**HRGreen**  
HRGreen.com  
Illinois Professional Design Firm  
#184-001322

|                       |                |           |
|-----------------------|----------------|-----------|
| USER NAME = whood     | DESIGNED - MGH | REVISED - |
| PLLOT SCALE = N.T.S.  | CHECKED - RGD  | REVISED - |
| PLLOT DATE = 7/1/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

**CITY OF AURORA  
DOWNER PLACE OVER THE EAST BRANCH  
OF THE FOX RIVER**

|                                |  |
|--------------------------------|--|
| SHEET NO. SE-1 OF SE-45 SHEETS |  |
|--------------------------------|--|

| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|--------------------|----------------|--------|---------------------------|-----------|
|                    | 07-00264-00-BR | KANE   | 164                       | 101       |
| CONTRACT NO. 63620 |                |        | ILLINOIS FED. AID PROJECT |           |

COMPANY NAME: HRGreen  
PROJECT CONTACT: Michael G. Harding  
CLIENT: City of Aurora  
DATE PLOTTED: 7/1/2011 10:30:09 AM  
FILE NAME: 86090472-E-09e01.dgn  
PLOT DRIVER: pdf-dt  
PEN TABLE: Struct-22x34.tbl

**GENERAL NOTES**

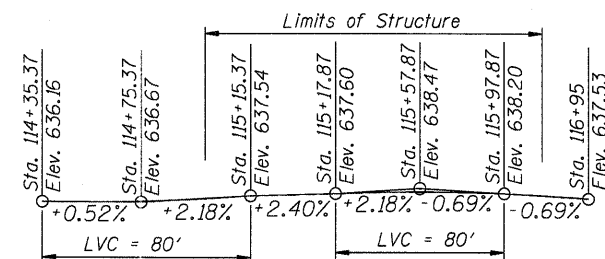
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR 3704 Floodway Construction permit number allowing permanent construction as shown in the contract plans.
- Concrete Sealer shall be applied to the designated areas of the abutments and piers.
- The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection. Forms for deck slab shall be removed prior to placement of bridge approach slab.
- All construction joints are bonded unless otherwise specified in the plans.
- If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.
- Existing reinforcement shall be cleaned and incorporated into the new construction. See Demolition Plan and Detail sheets. Cost included with Concrete Removal.
- The Contractor is reminded that:
  - As built and/or design drawings of the existing Downer Place bridges are not available. The outlines of portions of the existing abutments and piers that are not visible are approximations based on details available for similar bridges.
  - Existing buildings in the vicinity are listed as historic. Many predate the construction of the Downer Place bridges. Drawings for these buildings are typically not available.
  - The Contractor shall protect property adjacent to the right of way in accordance with article 107.20 and the Special Provisions. If the Contractor chooses to conduct a preconstruction condition survey of existing buildings and structures, he shall be responsible for contacting building owners to arrange access and keep records of the findings. The Resident Engineer shall be informed (in writing) of contacts made in this regard.
  - The cost of any work or materials the Contractor deems necessary to protect adjacent properties shall be included under "Remove Existing Structures" and shall not be paid for separately.
  - Pedestrian access to existing buildings shall be maintained in accordance with Article 107.09 and coordinated with the building owner. The Resident Engineer shall be informed (in writing) of contacts made in this regard.
- In-stream work is not allowed from April 1 - June 15 per IDNR. During this time work is allowed within the limits of Underwater Structure Excavation Protection.
- The Contractor must contact Robert Schanzle, Permit Program Manager, IDNR, Office of Realty and Environmental Planning at 217-785-5500 prior to any de-watering activities to coordinate a biologist to be on site for the relocation of any exposed mussels.
- The existing brick pavers located within the roadway of the bridge shall be removed and neatly stored on pallets for a maximum of 2 weeks within the barricaded work area for the City to pick up.

**SUGGESTED CONSTRUCTION SEQUENCE**

- Coordinate mussel survey and relocation with IDNR-OREP. See General Note 11.
- Install Cofferdam. See Sheet 39 for locations.
- Remove existing structures as shown in removal plans (Removal of Existing Structures).
- Repair pier bases and abutments as shown on removal, pier and abutment plans (Structural Repair of Concrete).
- Form and cast center section of piers and abutments include anchor bolts for light poles (Concrete Structures and Ornamental Light Unit, Complete).
- Install center twelve deck beams (Precast Prestressed Concrete Deck Beams).
- Erect pier and abutment fascia panels. Temporarily support as required (Furnishing and Erecting Precast Concrete Panels).
- Install bar splicers and connection hardware to back side of fascia panels at abutments and piers (Reinforcement Bars, Epoxy Coated and Furnishing and Erecting Precast Concrete Panels).
- Cast abutment and pier closure pours between center section and precast fascia panel (Concrete Structures).
- Erect outside deck beams (Precast Prestressed Concrete Deck Beams).
- Construct concrete wearing surface, include embedded conduit and hardware for lighting (Concrete Wearing Surface, 5" and Conduit Embedded in Structure).
- Construct approach pavement (Concrete Superstructure).
- Construct "hatch block" concrete between deck beams at piers and between approach pavements and beam ends at abutments (Concrete Superstructure).
- Erect center fascia panels. Connect temporary lateral support and/or pipe hangers as need to support precast (Furnishing and Erecting Precast Concrete Panels).
- Erect outlook upper section; shim and align with roadway profile and grout vertical anchor tubes (Furnishing and Erecting Precast Concrete Panels).
- Install hanger assemblies.
- Coordinate with AT&T to connect conduit to nearby vaults (by AT&T).
- Install (hang) watermain and rigid metal conduit for AT&T, ComEd, Comcast, and City of Aurora.
- Construct remaining hanger assemblies.
- Install sidewalk bar splicers into spanning fascia panels and outlooks (Reinforcement Bars, Epoxy Coated).
- Install formwork between fascia panels and outside deck beams (Concrete Superstructure).
- Construct sidewalk (Concrete Superstructure).
- Install bar splicers for cast-in-place rail base (Reinforcement Bars, Epoxy Coated).
- Construct base sections of bridge rail (Concrete Bridge Railing (Special)).
- Install precast elements of bridge rail (Concrete Bridge Railing (Special)).
- Construct pilaster/closure sections of bridge rail (Concrete Bridge Railing (Special)).
- Construct HMA pavement.

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**PROFILE GRADE**  
(Along Centerline of Roadway)

**WATERWAY INFORMATION**

|                             |           | Existing Low Grade Elev. 636.08 @ Sta. 113+50 |        | Proposed Low Grade Elev. 636.08 @ Sta. 113+50 |        |            |       |               |       |
|-----------------------------|-----------|---|--------|---|--------|------------|-------|---------------|-------|
| Drainage Area = 1705 Sq Mi. |           | Existing                                      |        | Prop.   |        | Head - Ft. |       | Headwater El. |       |
| Flood                       | Freq. Yr. | Q C.F.S.                                      | Exist. | Prop.   | H.W.E. | Exist.     | Prop. | Exist.        | Prop. |
|                             | 10        | 6150  | 1349   | 1349  | 627.0  | 0          | 0     | 627.0         | 627.0 |
| Design                      | 50        | 8600  | 1518   | 1518  | 629.0  | 0          | 0     | 629.0         | 629.0 |
| Base                        | 100       | 9420  | 1541   | 1541  | 629.6* | 0.1        | 0.1   | 629.7         | 629.7 |
| Overtopping                 | >500      |   |        |   |        |            |       |               |       |

\* = Interpolated

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harshbarger  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 10:40:11 AM  
 FILE NAME: 045-6005-1.dwg  
 PLOT DRIVER: plotdrv1  
 PEN TABLE: Struct 22x34.tbl

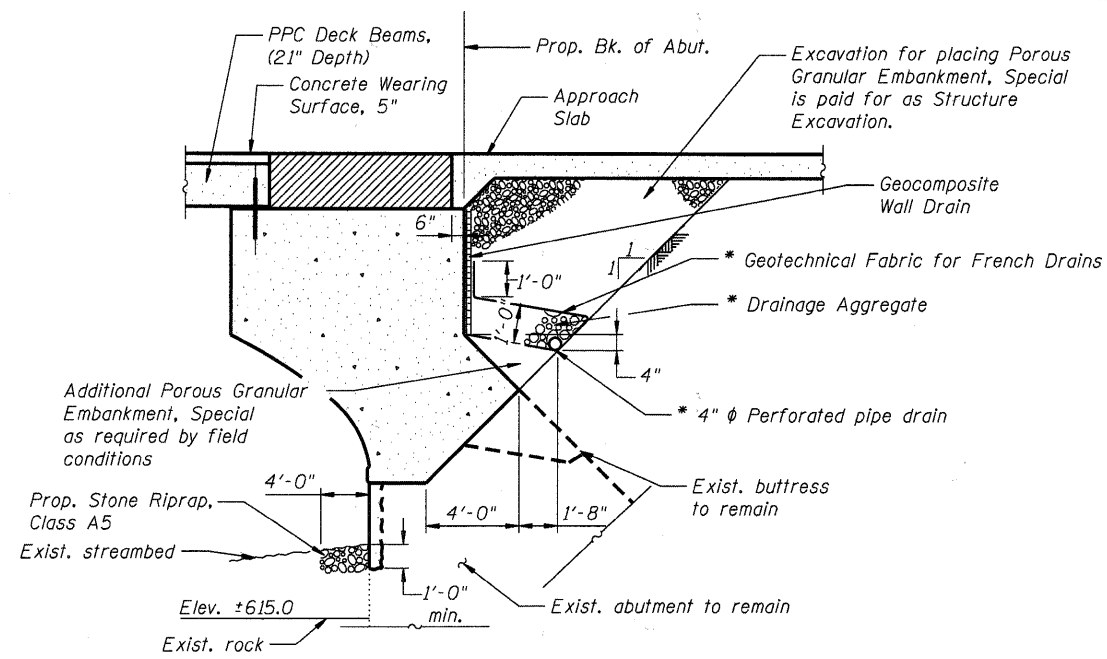
**HRGreen.com**  
 Illinois Professional Design Firm  
 #194-001322

|                       |                |           |
|-----------------------|----------------|-----------|
| USER NAME = whood     | DESIGNED - MGH | REVISED - |
| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

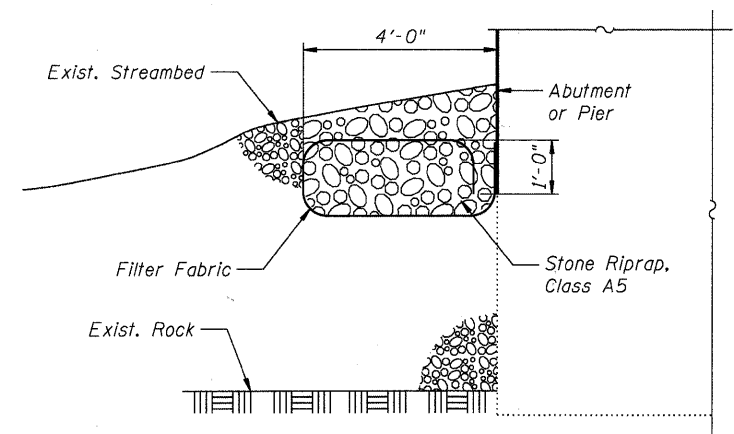
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**STRUCTURE NO. 045-6005**  
 SHEET NO. SE-2 OF SE-45 SHEETS

| F.A. RTE.                   | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------------|----------------|--------|--------------|-----------|
|                             | 07-00264-00-BR | KANE   | 164          | 102       |
| CONTRACT NO. 63620          |                |        |              |           |
| [ILLINOIS] FED. AID PROJECT |                |        |              |           |



**SECTION THRU ABUTMENT**  
Dimensions at Rt. L's

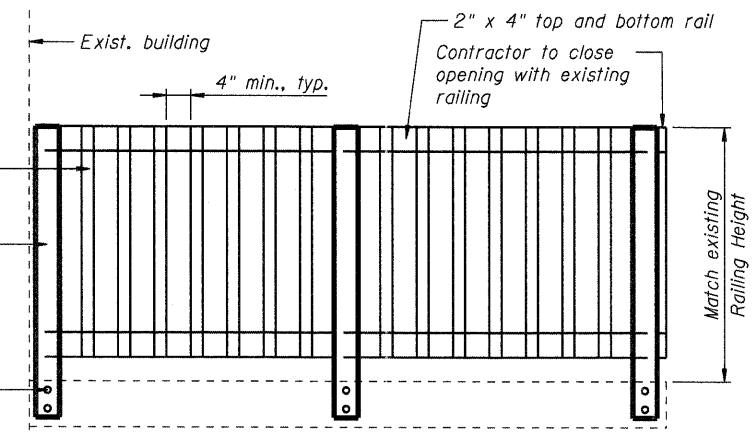
\*Included in the cost of Pipe Underdrains for Structures.



**STONE RIPRAP DETAIL**

**LEGEND**  
For SE-1

- T— Exist. Telephone. Abandoned by AT&T prior to Const.
- E— Exist. City of Aurora electric, to be relocated
- W— Exist. City of Aurora water main, 12"
- T— Prop. conduit for AT&T
- W— Prop. City of Aurora water main, 12"
- E— Prop. conduit for ComEd and Comcast
- O— Prop. conduit for City of Aurora

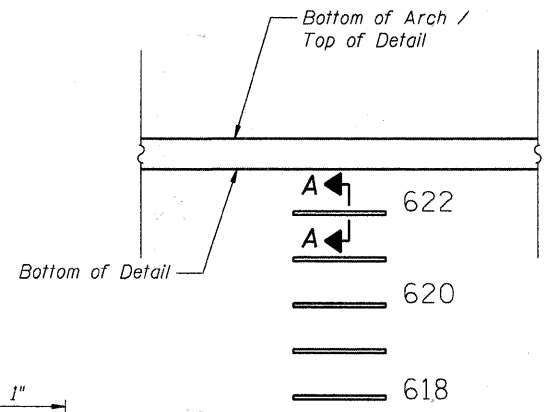


**RAILING CLOSURE DETAIL**  
(Looking South)

Contractor shall use pressure treated lumber and finish it with and exterior black paint.  
Cost for this work and materials included in the pay item for Removal of Existing Structures No. 2.

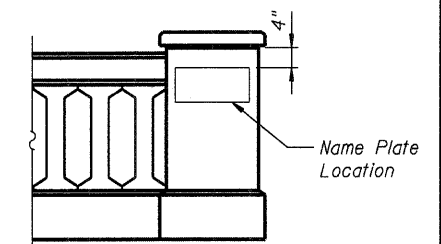
**TOTAL BILL OF MATERIAL**

| ITEM   | UNIT  | SUPER  | SUB     | TOTAL   |
|--|-------|--------|---------|---------|
| Stone Riprap, Class A5   | Sq Yd | ---    | 220     | 220     |
| Filter Fabric  | Sq Yd | ---    | 1,006   | 1,006   |
| Removal of Existing Structures No. 2                                 | Each  | 0.5    | 0.5     | 1       |
| Concrete Removal   | Cu Yd | ---    | 192.0   | 192.0   |
| Structure Excavation   | Cu Yd | ---    | 295.2   | 295.2   |
| Cofferdam Excavation   | Cu Yd | ---    | 401.3   | 401.3   |
| Cofferdam (Location - 4)   | Each  | ---    | 1       | 1       |
| Cofferdam (Location - 5)   | Each  | ---    | 1       | 1       |
| Cofferdam (Location - 6)   | Each  | ---    | 1       | 1       |
| Concrete Structures  | Cu Yd | ---    | 1,051.6 | 1,051.6 |
| Concrete Superstructure  | Cu Yd | 314.3  | ---     | 314.3   |
| Bridge Deck Grooving   | Sq Yd | 869    | ---     | 869     |
| Protective Coat  | Sq Yd | 1,325  | ---     | 1,325   |
| Precast Prestressed Concrete Deck Beams (21" Depth)                  | Sq Ft | 7,486  | ---     | 7,486   |
| Reinforcement Bars   | Pound | ---    | 1,450   | 1,450   |
| Reinforcement Bars, Epoxy Coated                                     | Pound | 33,260 | 83,510  | 116,770 |
| Bar Splicers   | Each  | 258    | 453     | 711     |
| Name Plates  | Each  | 1      | ---     | 1       |
| Concrete Sealer  | Sq Ft | ---    | 612     | 612     |
| Geocomposite Wall Drain  | Sq Yd | ---    | 106     | 106     |
| Concrete Bridge Railing  | Foot  | 367    | ---     | 367     |
| Porous Granular Embankment, Special                                  | Cu Yd | ---    | 338.0   | 338.0   |
| Concrete Wearing Surface, 5"   | Sq Yd | 715    | ---     | 715     |
| Pedestrian Rail (Special)  | Foot  | 3      | ---     | 3       |
| Structural Repair Of Concrete (Depth Equal to or Less than 5 Inches) | Sq Ft | ---    | 3,244   | 3,244   |
| Structural Repair Of Concrete (Depth Greater than 5 Inches)          | Sq Ft | ---    | 812     | 812     |
| Drainage Scupper, DS11   | Each  | 2      | ---     | 2       |
| Silicone Joint Sealer, 1"  | Foot  | 150    | ---     | 150     |
| Pipe Underdrains for Structures 4"                                   | Foot  | ---    | 158     | 158     |
| Furnishing And Erecting Precast Concrete Panels, Structure 2         | L Sum | 1      | ---     | 1       |



**STREAM GAUGE DETAIL**

Location of the Stream Gauge shall be at the northwest side of Pier 2 and approved by the Engineer. Number lettering shall be 4" tall x 2 3/4" wide x 1/2" deep. Stream gauge included in cost for Structural Repair of Concrete (Depth equal to or less than 5 inches).



**NORTHEAST PILASTER**  
(Center Name Plate horizontally on pilaster.)

STATION 115+90  
RE-BUILT 201. BY  
CITY OF AURORA  
LOADING HL-93  
STRUCTURE NO. 045-6005

**NAME PLATE**  
See Std. 515001

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 DATE PLOTTED: 7/26/2011 11:05:21 AM  
 FILE NAME: 86090412-E-09and02.dgn  
 PLOT DRIVER: pdfplot  
 PEN TABLE: Struct 22x34.tbl



|                       |                |           |
|-----------------------|----------------|-----------|
| USER NAME = whood     | DESIGNED - MGH | REVISED - |
| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**



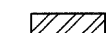
**GENERAL DATA**  
**STRUCTURE NO. 045-6005**  
SHEET NO. SE-3 OF SE-45 SHEETS

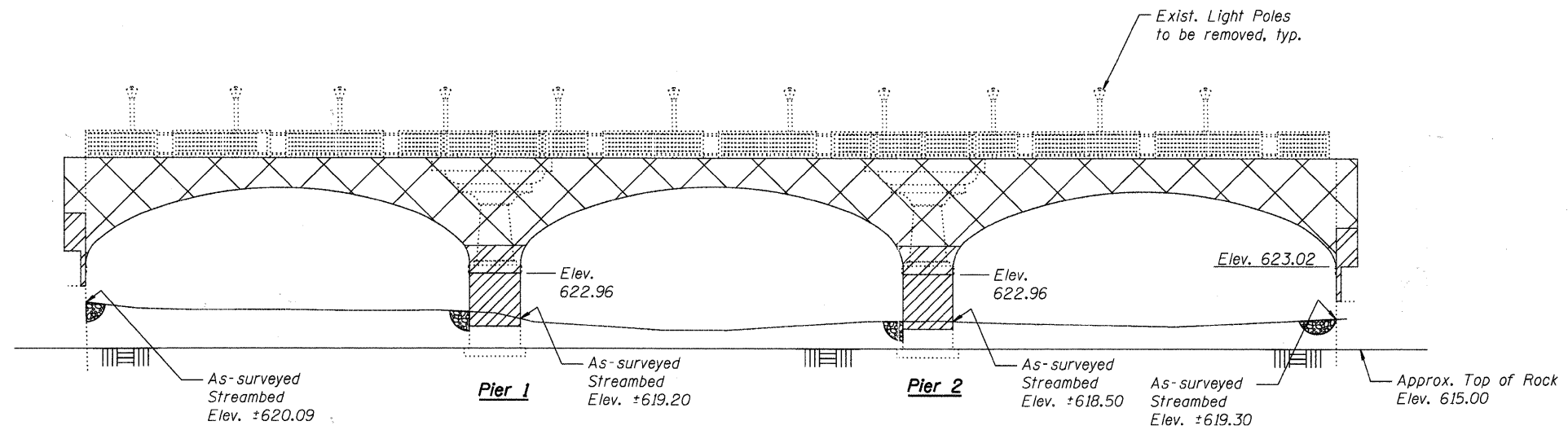
| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---------------------------|----------------|--------|--------------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164                | 103       |
|                           |                |        | CONTRACT NO. 63620 |           |
| ILLINOIS FED. AID PROJECT |                |        |                    |           |

**BILL OF MATERIAL**

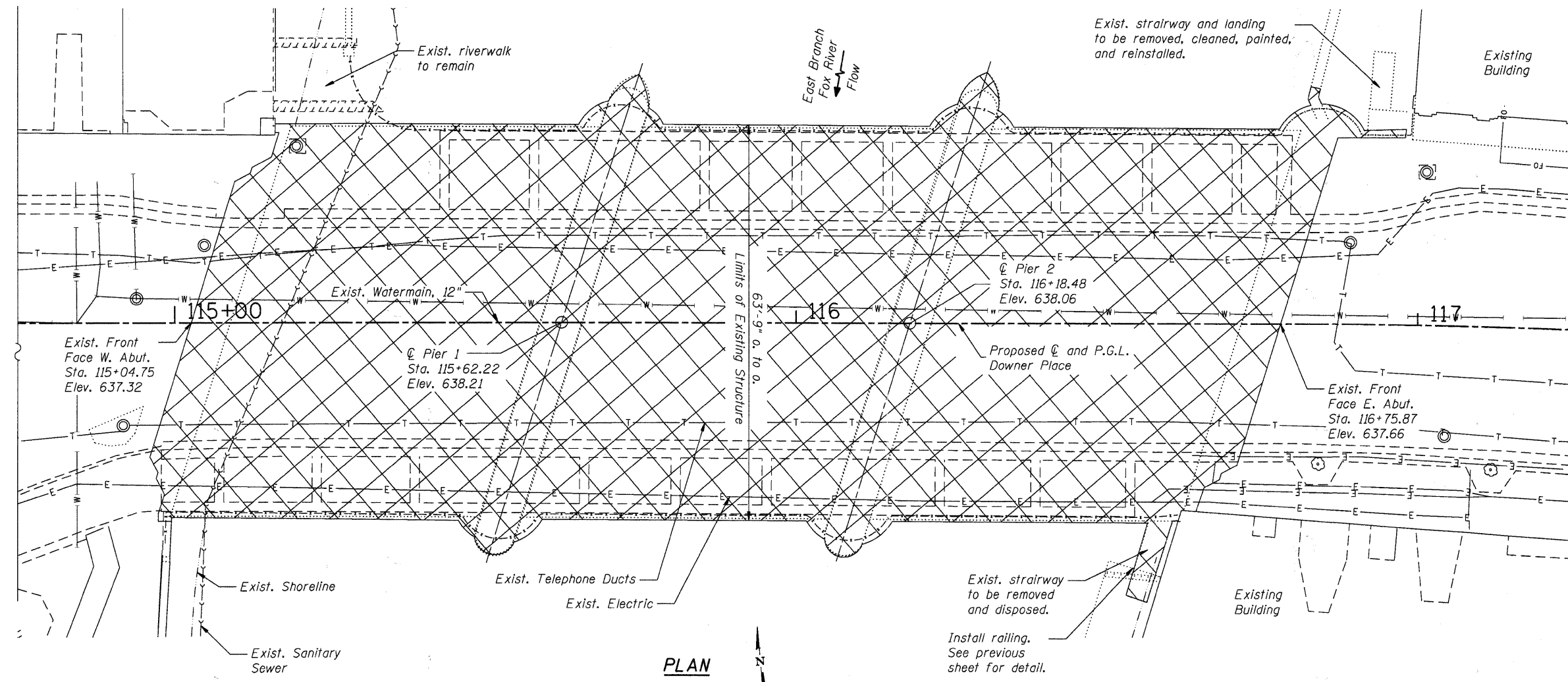
| ITEM  | UNIT    | TOTAL |
|---|---------|-------|
| Removal of Existing Structures No. 2                              | L. Sum  | 1     |
| Concrete Removal  | Cu. Yd. | 189.3 |
| Structural Repair of Concrete (Depth Equal to or Less than 5 in.) | Sq. Ft. | 3,306 |
| Structural Repair of Concrete (Depth Greater than 5 in.)          | Sq. Ft. | 830   |

**LEGEND**

-  Removal associated with Structural Repair of Concrete
-  Removal of Existing Structures No. 2.
-  Concrete Removal for Splicing Existing Reinforcement



**ELEVATION**



**PLAN**

**Notes:**

1. Removal of the existing bridge, rails, light poles, sidewalk, conc. spandrel walls, fill, sawcuts, stairways, conc. retaining walls, pavement, concrete arches, and upper portions of piers and abutments are items included in the pay item "Removal of Existing Structures No. 2."
2. Partial removal of the existing concrete abutments and piers as shown on this sheet and the following two sheets is included in the pay item "Concrete Removal."
3. Partial removal and repair of the existing concrete abutments and piers, as shown on this sheet and the following two sheets is included in the pay item "Structural Repair of Concrete."
4. The Illinois Department of Transportation is NOT the owner of record for this bridge. Those seeking historic, As-Built or other existing documents and plans must contact the owner of record to make arrangements for access to this information. The owner of record is the City of Aurora and they have no historic, As-Built or other existing documents or plans for this bridge.
5. Work this sheet and the following two sheets with pier and abutment sheets SE-30 to SE-42.
6. Existing reinforcement extending into removal area shall be cleaned, straightened, and incorporated into new construction. Cost included in pay item "Concrete Removal."
7. The existing steel stairway and landing adjacent to City Hall shall be removed, cleaned, primed, painted, and reinstalled. The steel shall be cleaned according to the IDOT Guide Bridge Special Provision for Cleaning and Painting Existing Steel Structures and primed and finished according to the Special Provision for Pedestrian Railing (Special). Cost for this work is included in Removal of Existing Structures No. 2.

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 DATE PLOTTED: 7/26/2011 11:03:59 AM  
 FILE NAME: 86090412-e-demco.dgn  
 PLOT DRIVER: pdf.plt  
 PEN TABLE: Struct\_22x34.tbl



USER NAME = whood  
 PLOT SCALE = N.T.S.  
 PLOT DATE = 7/26/2011

DESIGNED - MGH  
 CHECKED - RGD  
 DRAWN - WJH  
 CHECKED -

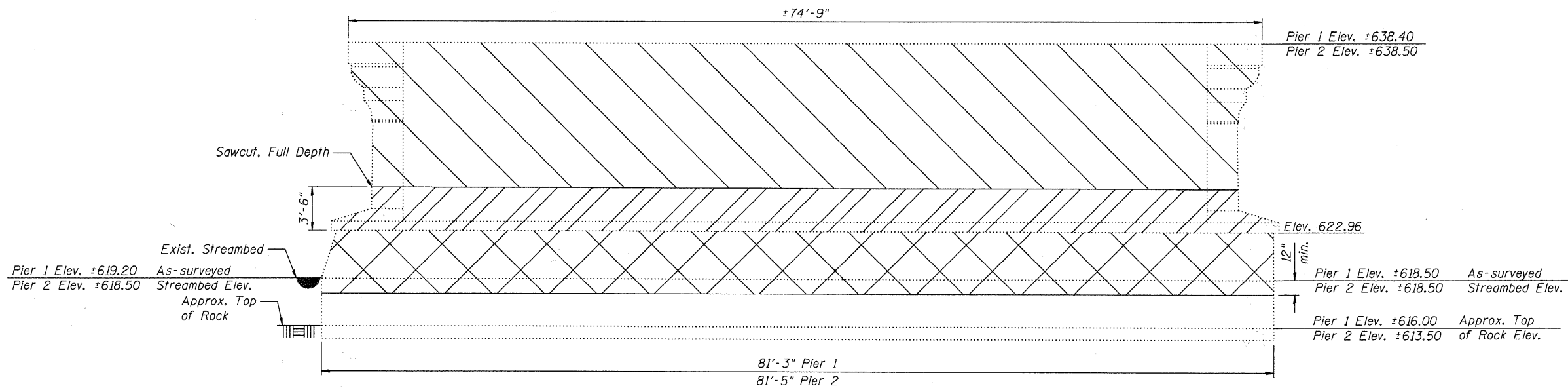
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 REVISED -  
 REVISED -

**CITY OF AURORA  
DOWNER PLACE OVER THE EAST BRANCH  
OF THE FOX RIVER**

**DEMOLITION PLAN AND DETAILS  
STRUCTURE NO. 045-6005**

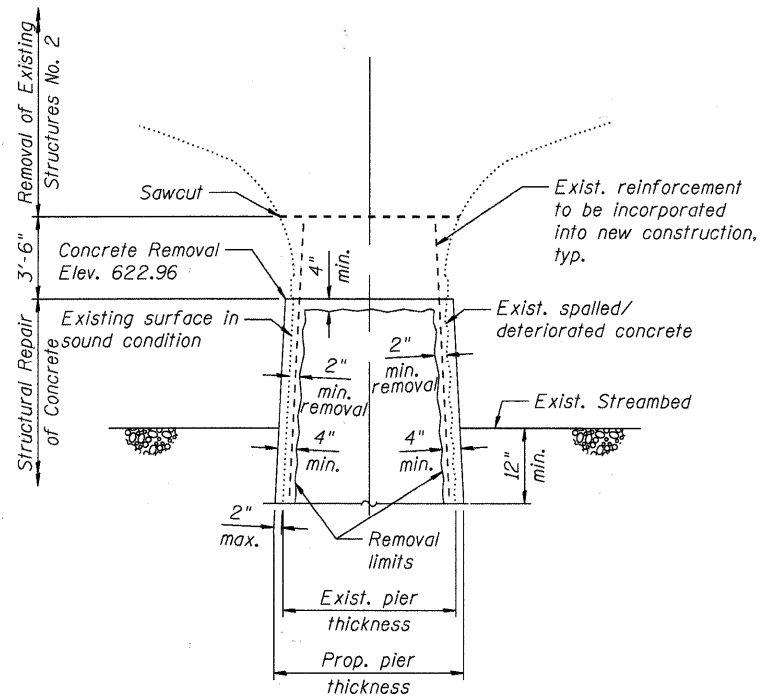
SHEET NO. SE-4 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|----------------|--------|--------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164          | 104       |
| CONTRACT NO. 63620        |                |        |              |           |
| ILLINOIS FED. AID PROJECT |                |        |              |           |



**PIER ELEVATION**

(Looking East)



**REMOVAL SECTION THRU PIER**

The proposed pier thickness shall be the original thickness plus two inches on each side, but must include a minimum of two inches of concrete removal from the existing conditions down to sound concrete in accordance with Guide Bridge Special Provision "Structural Repair of Concrete" and a total thickness of no less than four inches of new/repair concrete.

**LEGEND**

- Indicates area of Removal of Existing Structures No. 2.
- Indicates removal area associated with Structural Repair of Concrete
- Indicates area of Concrete Removal for reinforcement splicing

**Notes:**

1. Removal of the existing bridge, rails, sidewalk, conc. spandrel walls, fill, conc. retaining walls, sawcuts, pavement, concrete arches and piers are all included in the pay item "Removal of Existing Structures No. 2."
2. The Illinois Department of Transportation is NOT the owner of record for this bridge. Those seeking historic, As-Built or other existing documents and plans must contact the owner of record to make arrangements for access to this information. The owner of record is the City of Aurora and they have no historic, As-Built or other existing documents or plans for this bridge.
3. Existing reinforcement extending into removal area shall be cleaned, straightened, and incorporated into the new construction. Cost included in pay item Concrete Removal.
4. Work this sheet with pier and abutment sheets SE-30 to SE-42.

COMPANY NAME: HRGREEN  
 PROJECT CONTACT: Michael G. Harding  
 CLIENT: CITY OF AURORA  
 PLOT DATE: 7/26/2011  
 FILE NAME: 07-00264-00-BR-045-PIER.dgn  
 PLOT DRIVER: pdfplot  
 PEN TABLE: Struct. 22x34.tbl



|                       |                |           |
|-----------------------|----------------|-----------|
| USER NAME = whood     | DESIGNED - SSM | REVISED - |
| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

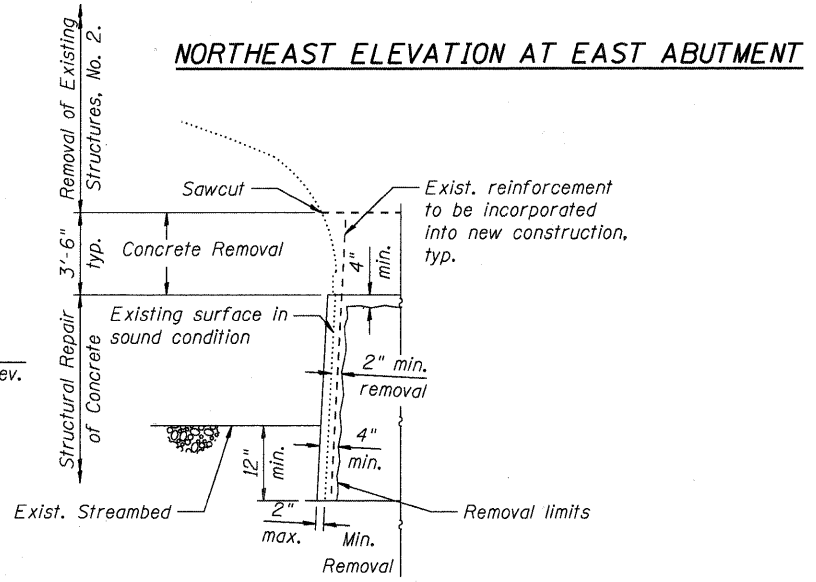
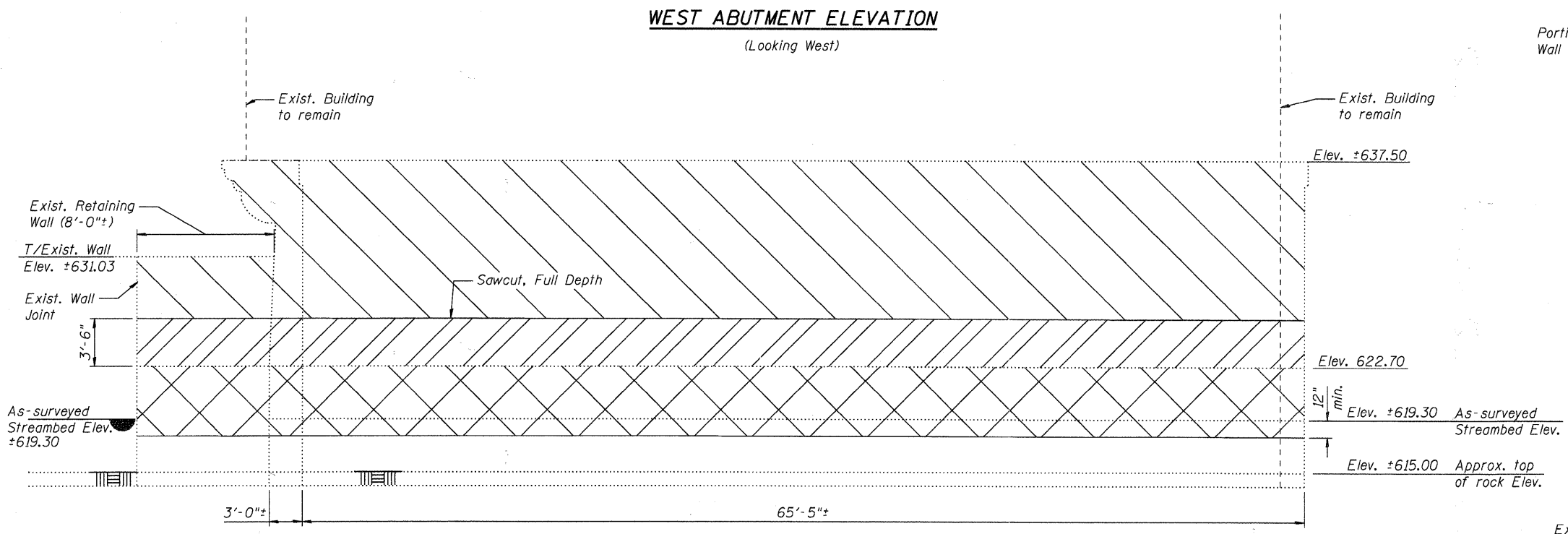
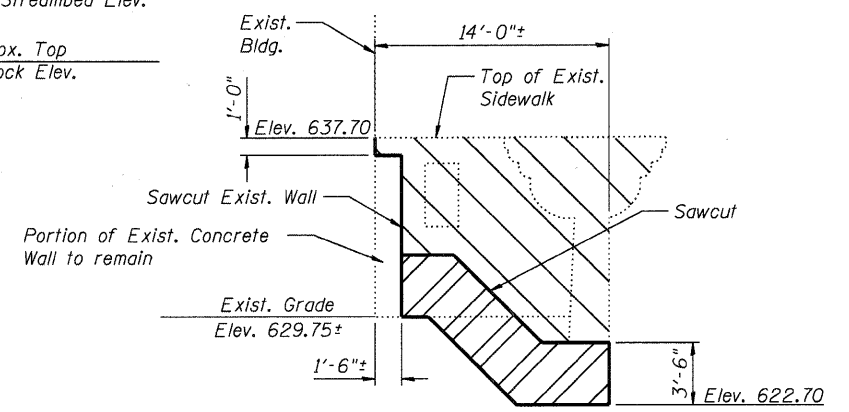
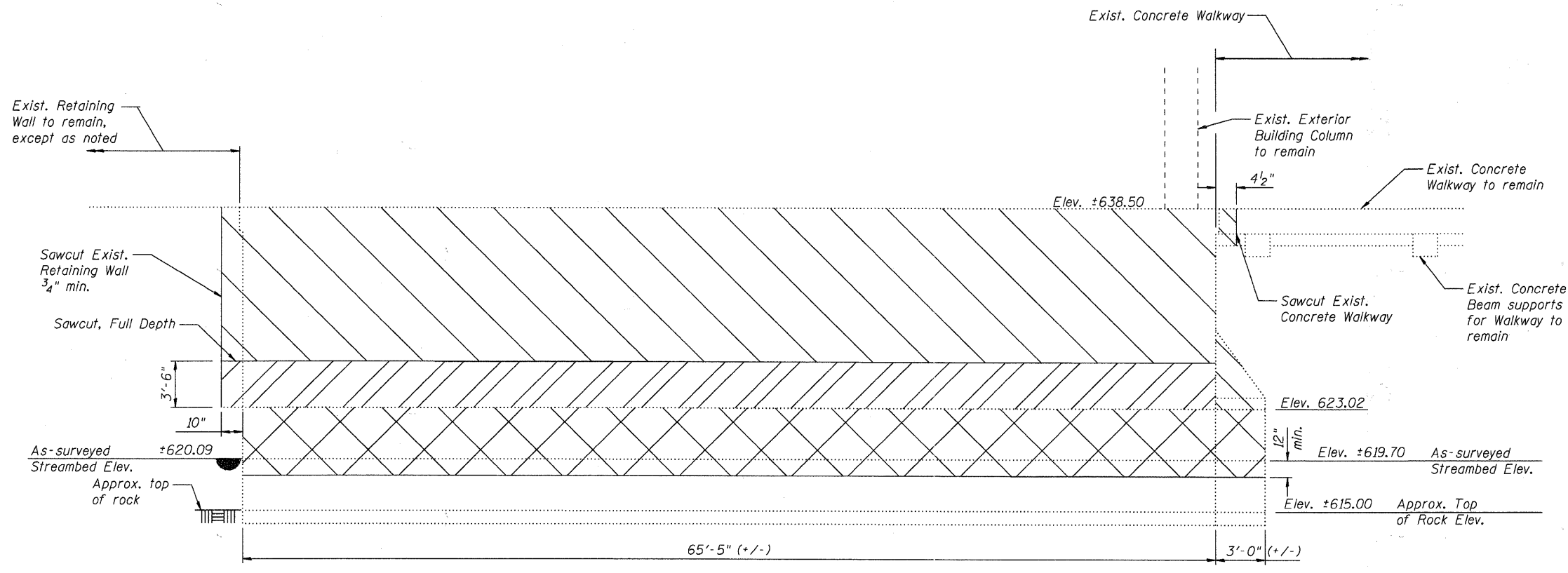
**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**DEMOLITION DETAILS - PIERS**  
**STRUCTURE NO. 045-6005**

SHEET NO. SE-5 OF SE-45 SHEETS

|                           |                |        |                    |           |
|---------------------------|----------------|--------|--------------------|-----------|
| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|                           | 07-00264-00-BR | KANE   | 164                | 105       |
|                           |                |        | CONTRACT NO. 63620 |           |
| ILLINOIS FED. AID PROJECT |                |        |                    |           |

- Notes:
1. Removal of the existing bridge, rails, sidewalk, conc. spandrel walls, fill, conc. retaining walls, sawcuts, pavement, concrete arches and piers are all included in the pay item "Removal of Existing Structures No. 2."
  2. The Illinois Department of Transportation is NOT the owner of record for this bridge. Those seeking historic, As-Built or other existing documents and plans must contact the owner of record to make arrangements for access to this information. The owner of record is the City of Aurora and they have no historic, As-Built or other existing documents or plans for this bridge.
  3. Existing reinforcement extending into removal area shall be cleaned, straightened, and incorporated into the new construction. Cost included in pay item Concrete Removal.
  4. Work this sheet with pier and abutment sheets SE-30 to SE-42.



**LEGEND**

- Indicates area of Removal of Existing Structures
- Indicates removal area associated with Structural Repair of Concrete
- Indicates area of Concrete Removal for Reinforcement Splicing

Areas of Structural Repair of Concrete:  
For areas of sound concrete, the face of the abutment shall match the original profile plus two inches, but must include a minimum of two inches of concrete removal from the existing conditions down to sound concrete in accordance with Guide Bridge Special Provision "Structural Repair of Concrete" and a total thickness of no less than four inches of new/repair concrete.

COMPANY NAME: HRGreen  
 PROJECT CONTACT: HRGreen  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:03:39 AM  
 FILE NAME: 86090472-E-0anno-AB1.dgn  
 PLOT DRIVER: paf.plt  
 PEN TABLE: Struct 22x34.tbl

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| HRGreen.com<br>Illinois Professional Design Firm<br>#184-01322 | USER NAME = whoad     | DESIGNED - JMW | REVISED - | <b>CITY OF AURORA</b><br><b>DOWNER PLACE OVER THE EAST BRANCH</b><br><b>OF THE FOX RIVER</b> | <b>DEMOLITION DETAILS - ABUTMENTS</b><br><b>STRUCTURE NO. 045-6005</b> | F.A. RTE.                      | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
|  | PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |  |  | 07-00264-00-BR                 | KANE    | 164                       | 106          |           |
|  | PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |  |  | CONTRACT NO. 63620             |         | ILLINOIS FED. AID PROJECT |              |           |
|  |                       | CHECKED -      | REVISED - |  |  | SHEET NO. SE-6 OF SE-45 SHEETS |         |                           |              |           |

**CL. CROWN & PROFILE GRADE**

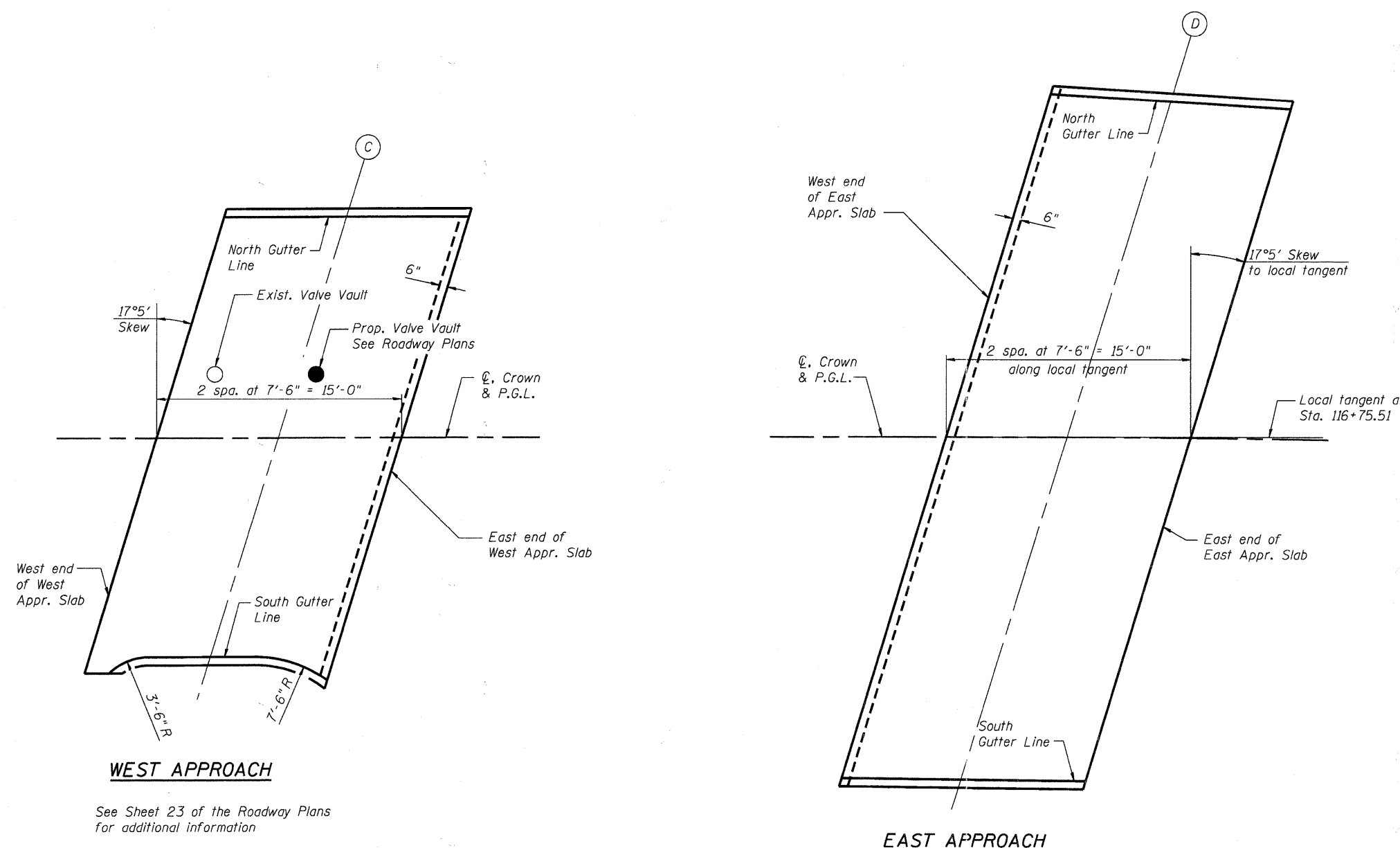
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|----------------------|-----------|--------|------------------------------|
| W. End of W. Appr. C | 114+90.27 | 0.00   | 637.06                       |
| E. End of W. Appr. C | 114+97.77 | 0.00   | 637.19                       |
| E. End of W. Appr. D | 115+05.27 | 0.00   | 637.33                       |
| W. End of E. Appr. D | 116+75.36 | 0.00   | 637.67                       |
| E. End of E. Appr. D | 116+82.85 | 0.00   | 637.61                       |
| E. End of E. Appr. D | 116+90.33 | 0.00   | 637.56                       |

**NORTH GUTTER LINE**

| Location             | Station   | Offset | Theoretical Grade Elevations |
|----------------------|-----------|--------|------------------------------|
| W. End of W. Appr. C | 114+94.42 | -13.5  | 636.84                       |
| E. End of W. Appr. C | 115+01.92 | -13.5  | 636.98                       |
| E. End of W. Appr. D | 115+09.42 | -13.5  | 637.13                       |
| W. End of E. Appr. D | 116+81.71 | -21.00 | 637.18                       |
| E. End of E. Appr. D | 116+88.94 | -20.59 | 637.14                       |
| E. End of E. Appr. D | 116+96.18 | -20.21 | 637.10                       |

**SOUTH GUTTER LINE**

| Location             | Station   | Offset | Theoretical Grade Elevations |
|----------------------|-----------|--------|------------------------------|
| W. End of W. Appr. C | 114+85.82 | 14.48  | 636.70                       |
| E. End of W. Appr. C | 114+93.62 | 13.50  | 636.84                       |
| E. End of W. Appr. D | 115+00.67 | 14.96  | 636.95                       |
| W. End of E. Appr. D | 116+68.90 | 21.00  | 637.27                       |
| E. End of E. Appr. D | 116+76.39 | 21.09  | 637.22                       |
| E. End of E. Appr. D | 116+83.99 | 21.16  | 637.17                       |



COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 DATE PLOTTED: 7/26/2011 10:33:53 AM  
 FILE NAME: 86090472-E-Asst.dgn  
 PLOT DRIVER: pdfplot  
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HRGreen.com  
 Illinois Professional Design Firm  
 #184-001322

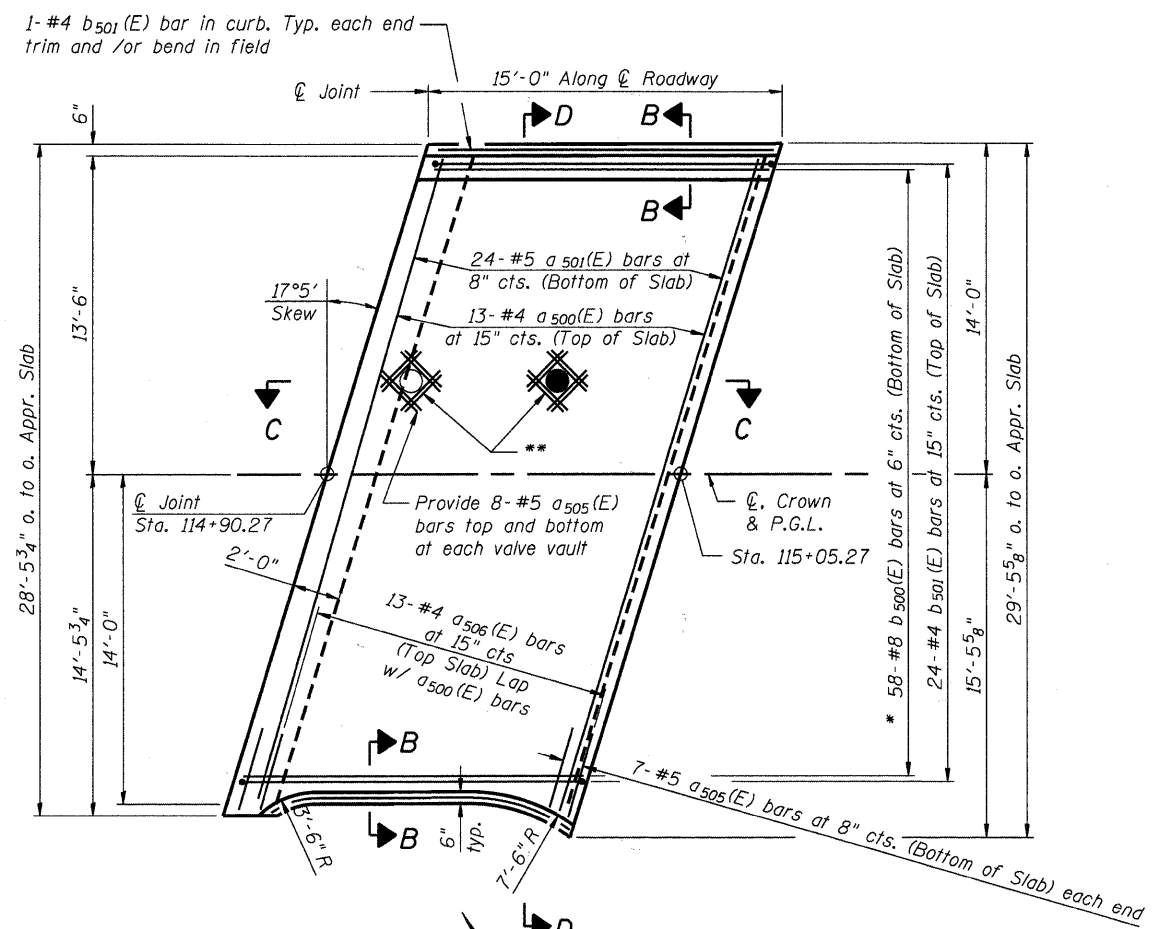
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| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

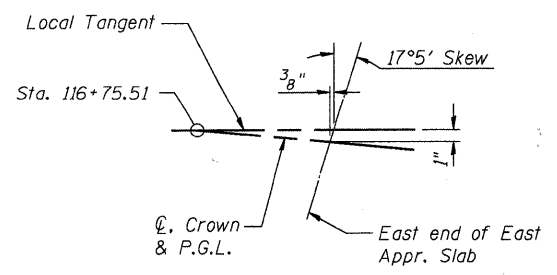
**TOP OF APPROACH SLAB ELEVATIONS**  
**STRUCTURE NO. 045-6005**  
 SHEET NO. SE-7 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO.          |
|---------------------------|----------------|--------|--------------|--------------------|
|                           | 07-00264-00-BR | KANE   | 164          | 107                |
|                           |                |        |              | CONTRACT NO. 63620 |
| ILLINOIS FED. AID PROJECT |                |        |              |                    |

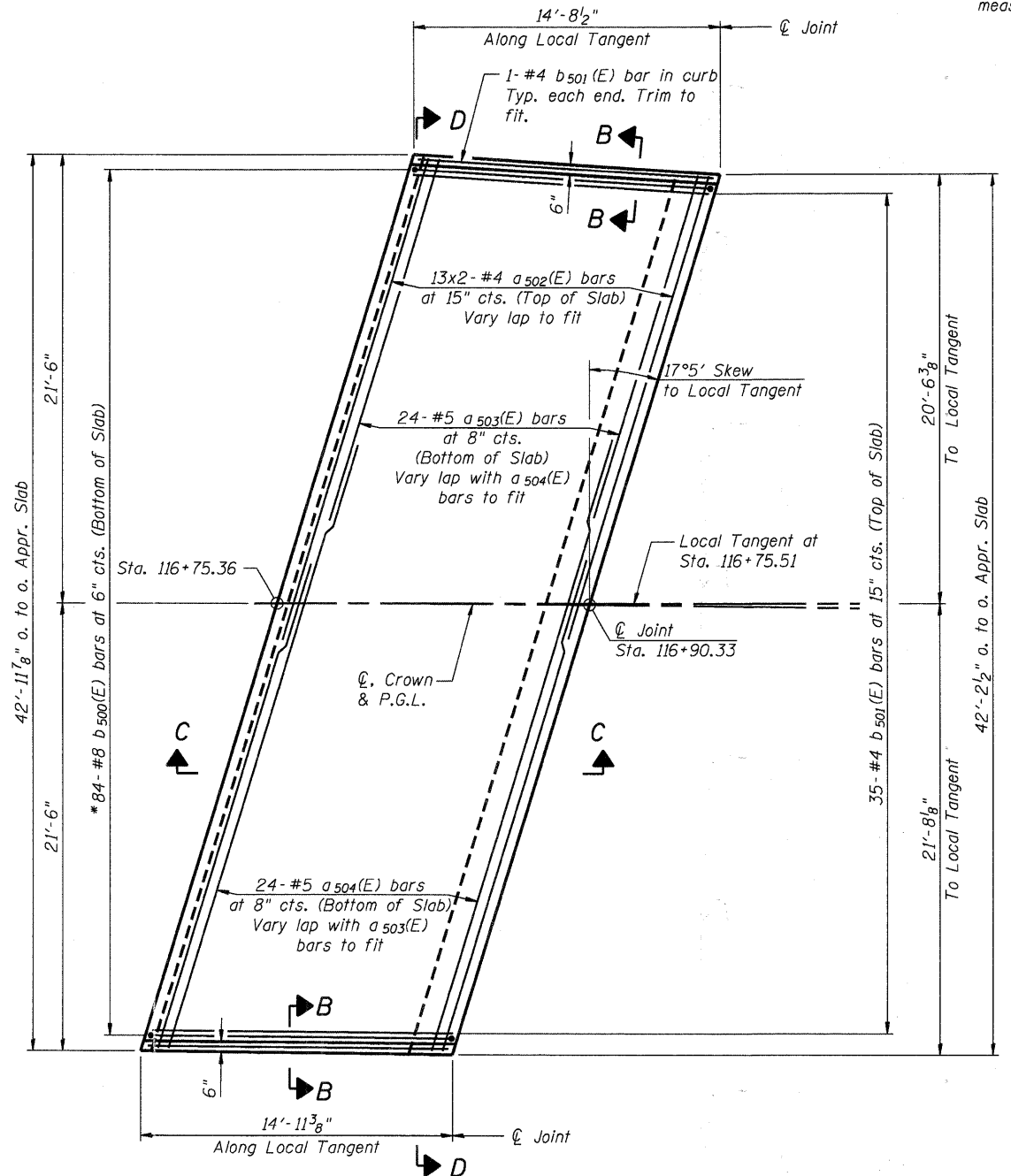
- Notes:  
 1. See next sheet for Sections C-C & D-D.  
 2.  $a_{500}(E)$ ,  $a_{501}(E)$ ,  $a_{502}(E)$ ,  $a_{503}(E)$  and  $a_{504}(E)$  bar spacings measured along  $\text{C.Rdwy.}$



**WEST APPROACH**  
 See Sheet 23 of the Roadway Plans for additional information



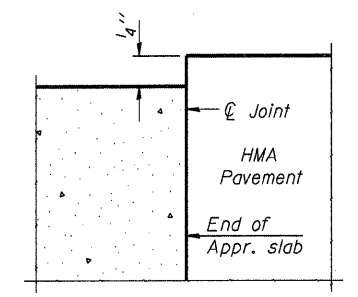
**OFFSET SKETCH**



**EAST APPROACH**

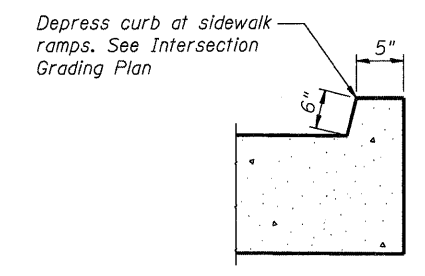
**PLAN**

- \* Tilt #8 b500(E) bars as required to maintain clearance.
- \*\* Form around existing and proposed water valve vaults. Provide 1/2" P.J.F. at interface around valve frame. Trim reinforcement to fit. Cost of P.J.F. included in "Concrete Superstructure."



**FLEXIBLE PAVEMENT**

**DETAIL A**



**VIEW B-B**

**MINIMUM BAR LAP**  
 #4 bar = 2'-1"  
 #5 bar = 2'-7"

(Sheet 1 of 2)

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael A. Harshbarger  
 DATE PLOTTED: 7/26/2011 10:35:41 AM  
 FILE NAME: 86090472-E-Asst01.dgn  
 PLOT DRIVER: default  
 PEN TABLE: Struct 22x34.tbl



|                       |                |           |
|-----------------------|----------------|-----------|
| USER NAME = whood     | DESIGNED - KMA | REVISED - |
| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

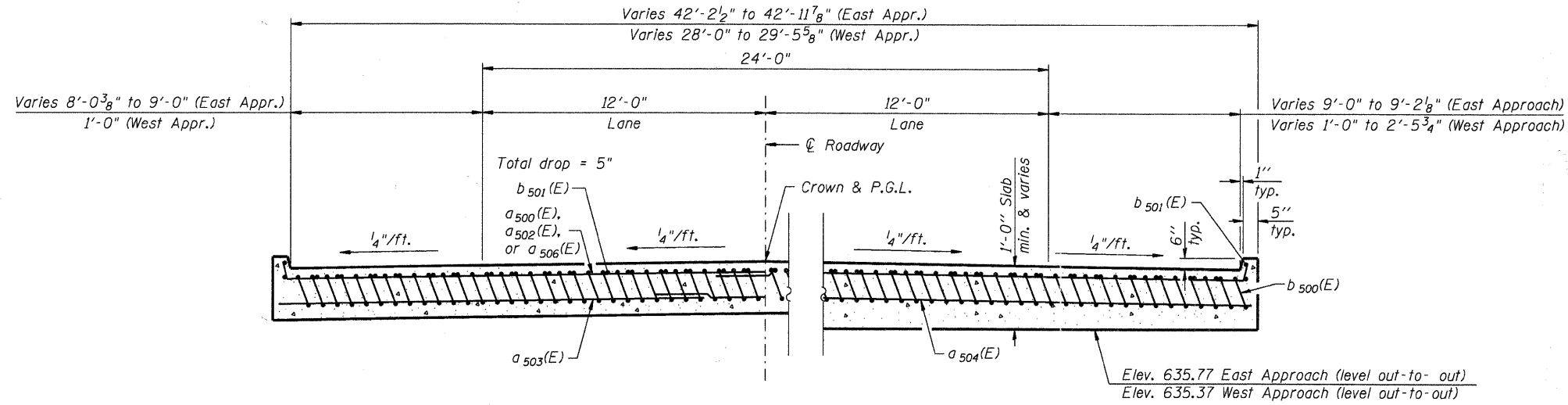
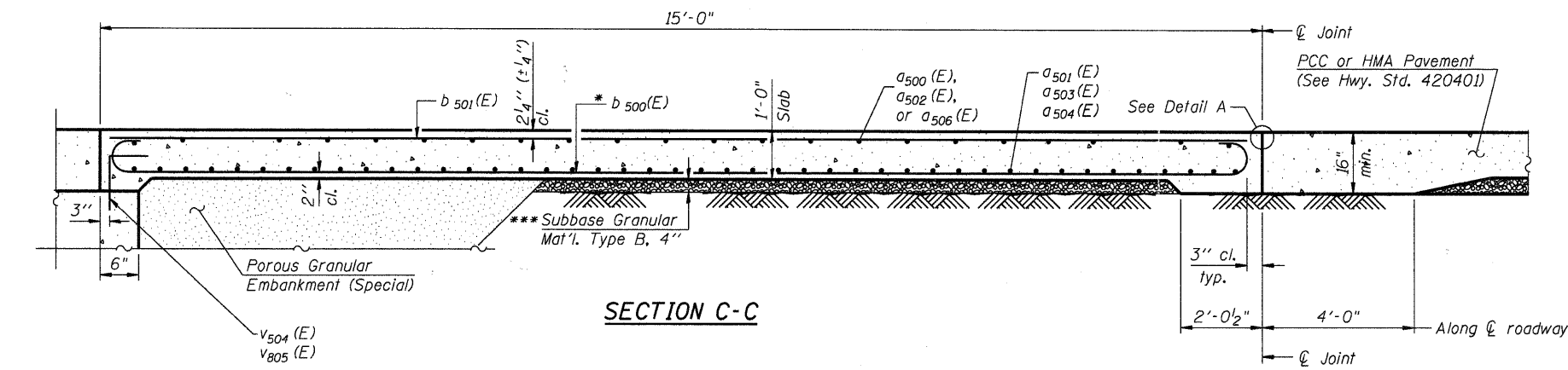
**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**BRIDGE APPROACH SLAB DETAILS**  
**STRUCTURE NO. 045-6005**  
 SHEET NO. SE-8 OF SE-45 SHEETS

| F.A. RTE.                   | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|-----------------------------|----------------|--------|--------------------|-----------|
|                             | 07-00264-00-BR | KANE   | 164                | 108       |
|                             |                |        | CONTRACT NO. 63620 |           |
| [ILLINOIS] FED. AID PROJECT |                |        |                    |           |



- Notes:
1. See previous sheet for Detail A and View B-B.
  2. Approach slab concrete shall be paid for as Concrete Superstructure.
  3. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
  4. For v(E) bar details, see sheets SE-31 of SE-35.
  5. The approach footing maximum applied service bearing pressure ( $Q_{max}$ ) = 2.0 ksf.
  6. Cost of excavation for approach included with Concrete Superstructure.
  7. For Porous Granular Embankment (Special) and drainage treatment details, see sheet SE-3.



NEAR ABUTMENT

AT CONNECTOR PAVEMENT

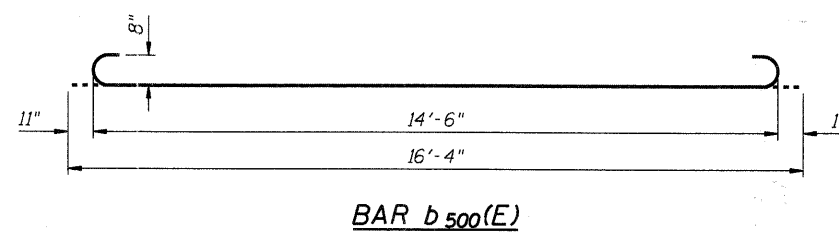
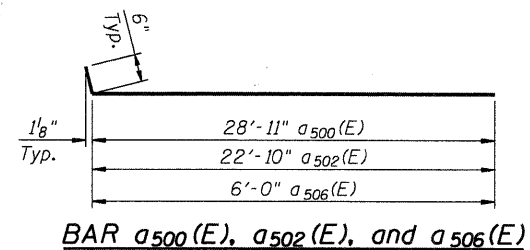
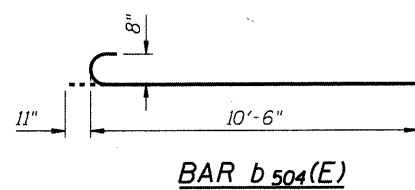
SECTION D-D

(See Plan for dimensions not shown)

**TWO APPROACHES  
BILL OF MATERIAL**

| Bar                              | No. | Size | Length   | Shape |
|----------------------------------|-----|------|----------|-------|
| a500(E)                          | 13  | #4   | 29'- 5"  | —     |
| a501(E)                          | 24  | #5   | 28'- 11" | —     |
| a502(E)                          | 26  | #4   | 23'- 4"  | —     |
| a503(E)                          | 24  | #5   | 17'- 3"  | —     |
| a504(E)                          | 24  | #5   | 30'- 0"  | —     |
| a505(E)                          | 46  | #5   | 6'- 0"   | —     |
| a506(E)                          | 13  | #4   | 6'- 6"   | —     |
| b500(E)                          | 142 | #8   | 16'- 4"  | —     |
| b501(E)                          | 63  | #4   | 14'- 6"  | —     |
| Concrete Superstructure          |     |      | Cu. Yd.  | 41.2  |
| Bridge Deck Grooving             |     |      | Sq. Yd.  | 108   |
| Protective Coat                  |     |      | Sq. Yd.  | 119   |
| Reinforcement Bars, Epoxy Coated |     |      | Pound    | 9,710 |

- \* Tilt #8 b500(E) bars as required to maintain clearance.
- \*\*\* Cost included with Concrete Superstructure.



(Sheet 2 of 2)

COMPANY NAME: HRGreen  
PROJECT CONTACT: Michael G. Harding  
CLIENT: City of Aurora  
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PLOT DRIVER: pdfPlot  
PEN TABLE: Struct 22x34.tbl



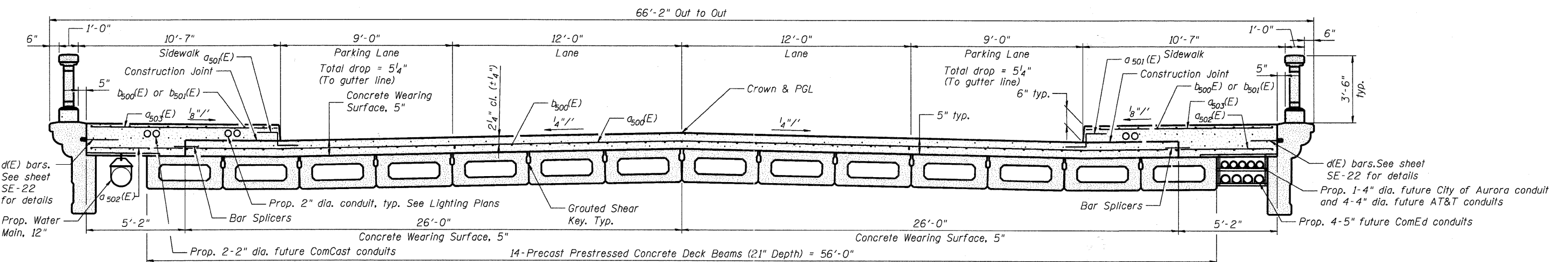
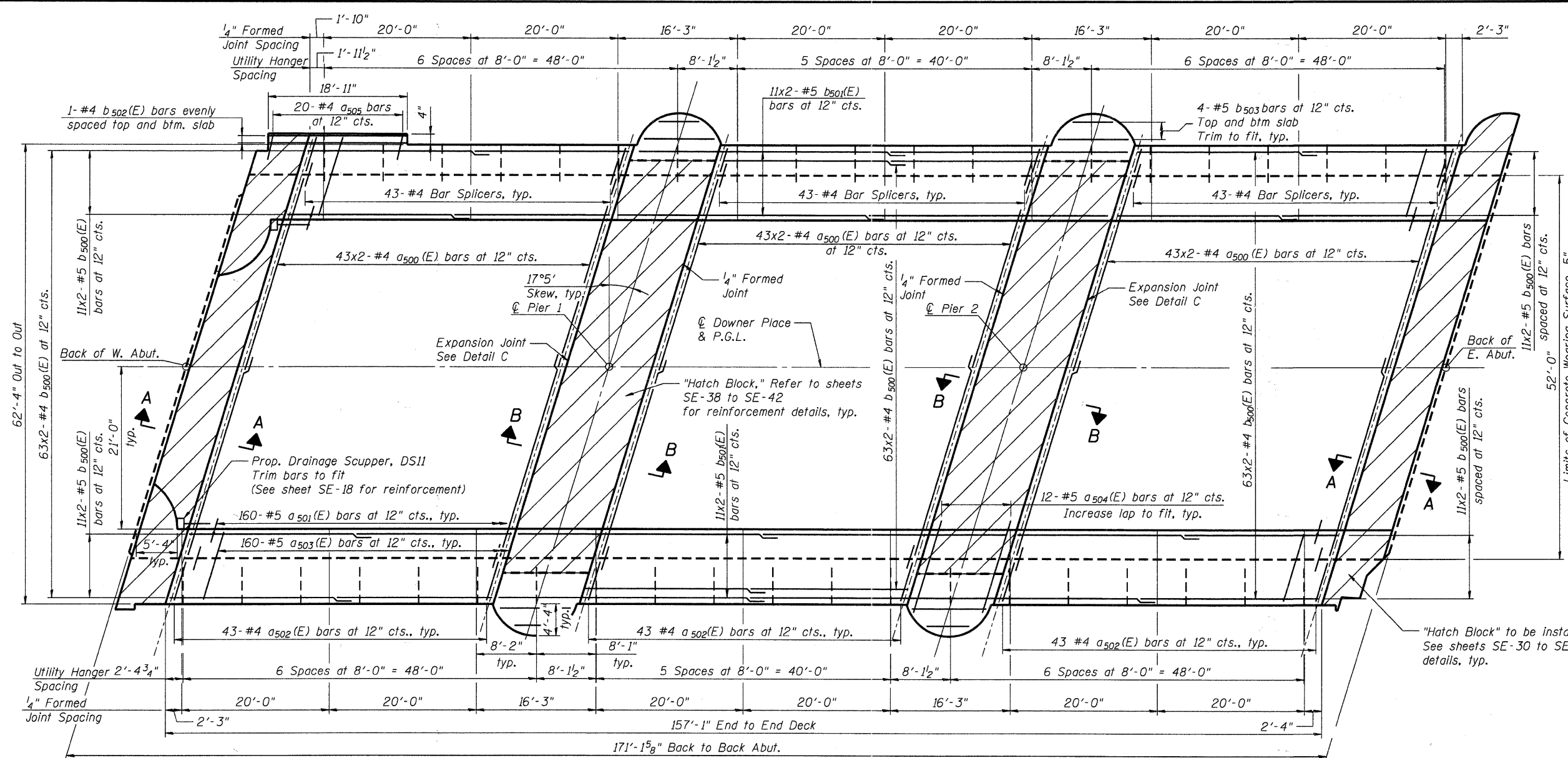
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| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

**CITY OF AURORA  
DOWNER PLACE OVER THE EAST BRANCH  
OF THE FOX RIVER**

**BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 045-6005**

SHEET NO. SE-9 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---------------------------|----------------|--------|--------------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164                | 109       |
|                           |                |        | CONTRACT NO. 63620 |           |
| ILLINOIS FED. AID PROJECT |                |        |                    |           |



**MINIMUM BAR LAP**  
#4 bar = 2'-1"

HRGreen  
1100 N. LaSalle  
Chicago, IL 60610  
773.233.1100  
www.hrgreen.com

HRGreen.com  
Illinois Professional Design Firm  
#184-001322

USER NAME = whood  
DESIGNED - JPG  
CHECKED - RGD  
DRAWN - WJH  
CHECKED -  
PLOT SCALE = N.T.S.  
PLOT DATE = 7/26/2011

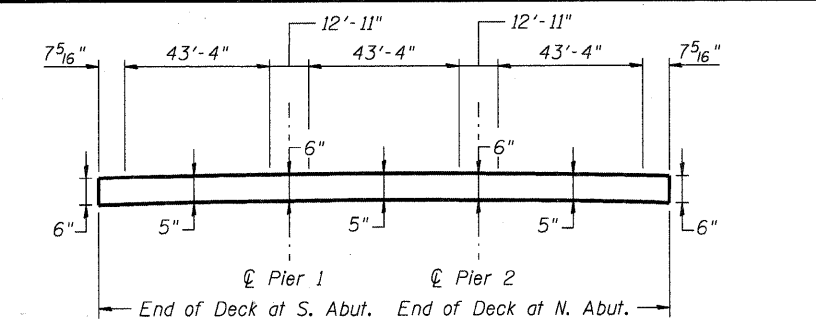
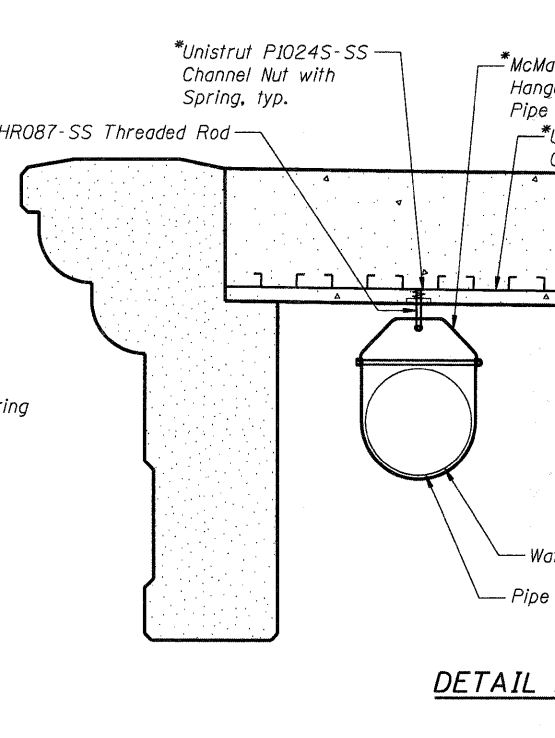
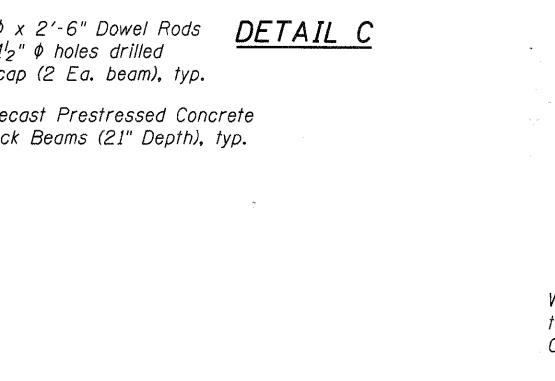
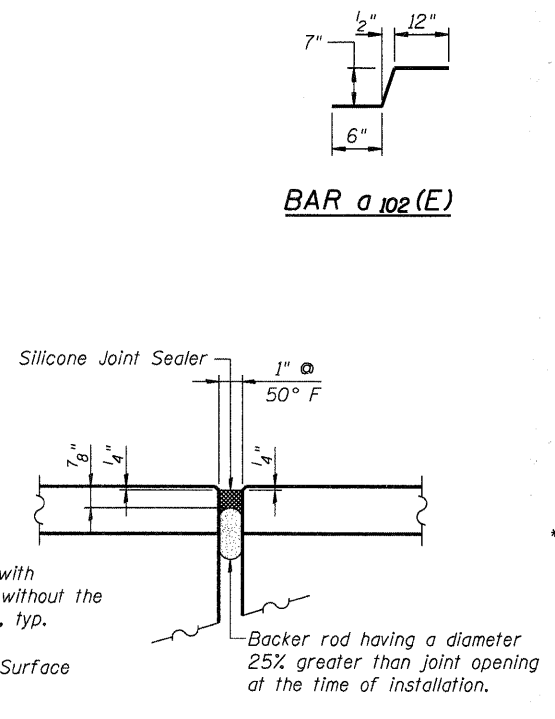
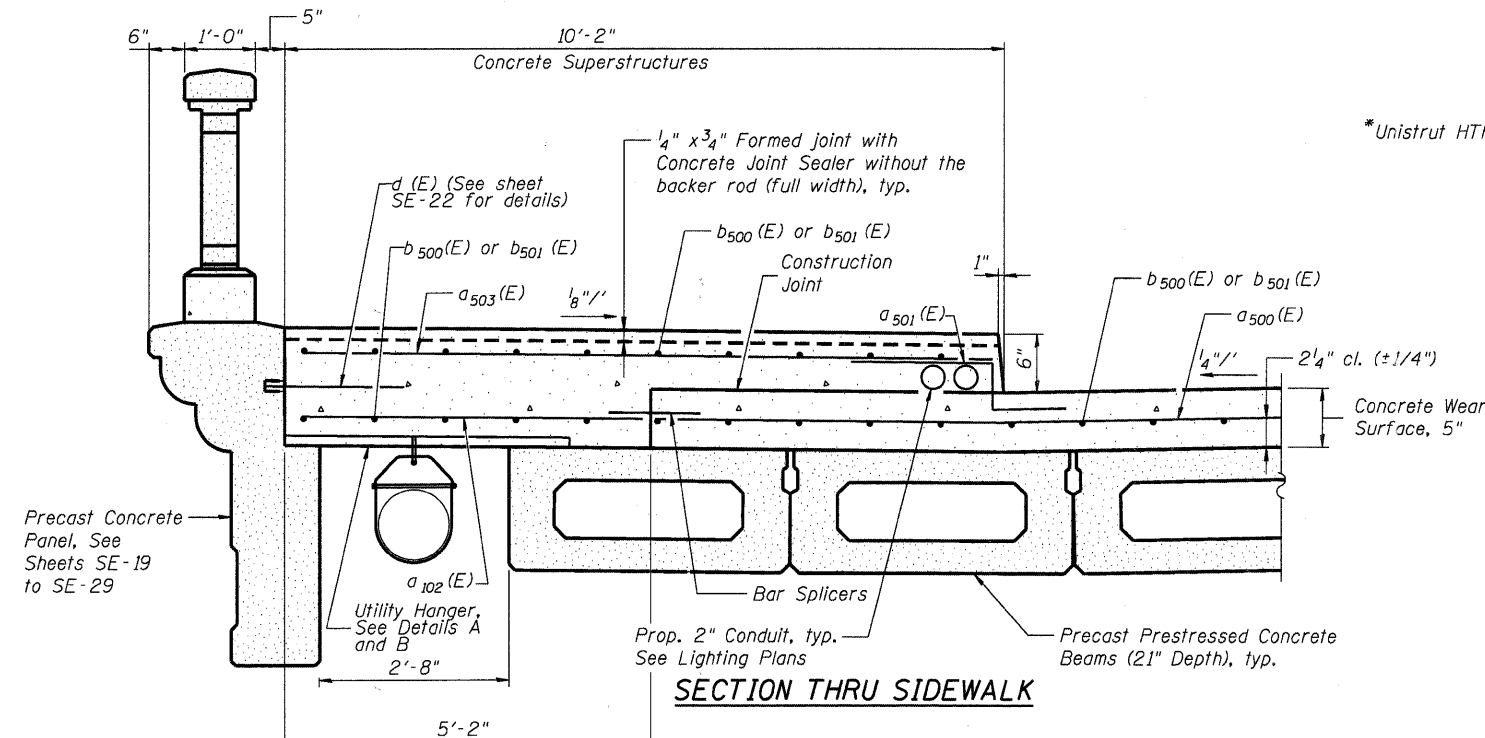
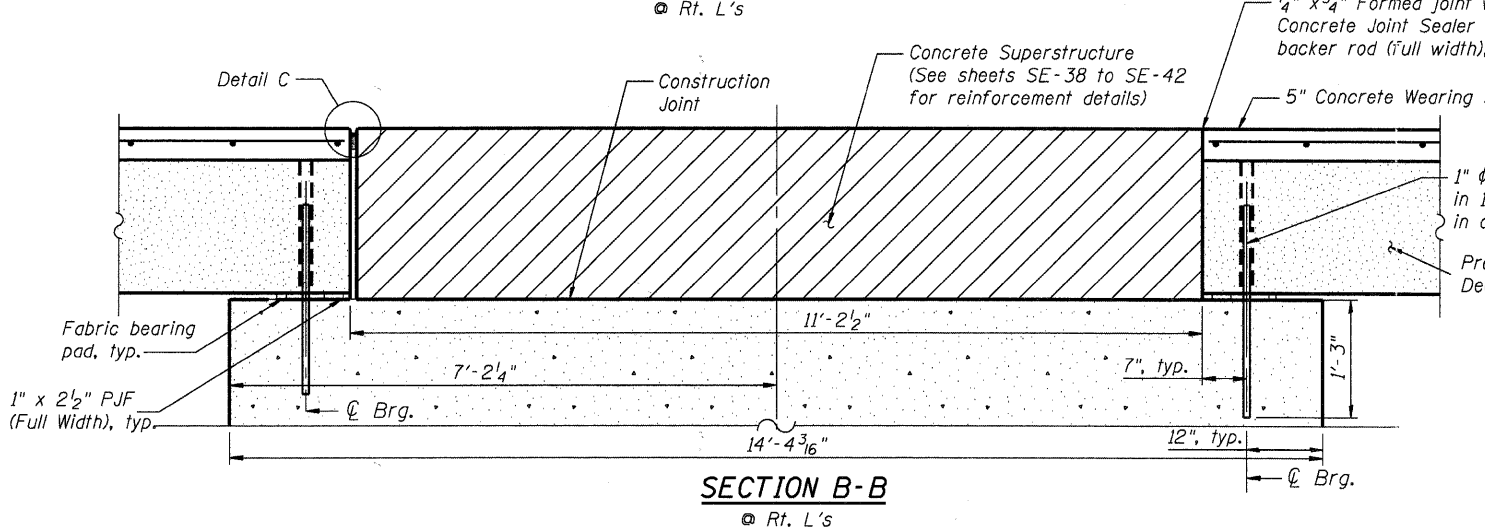
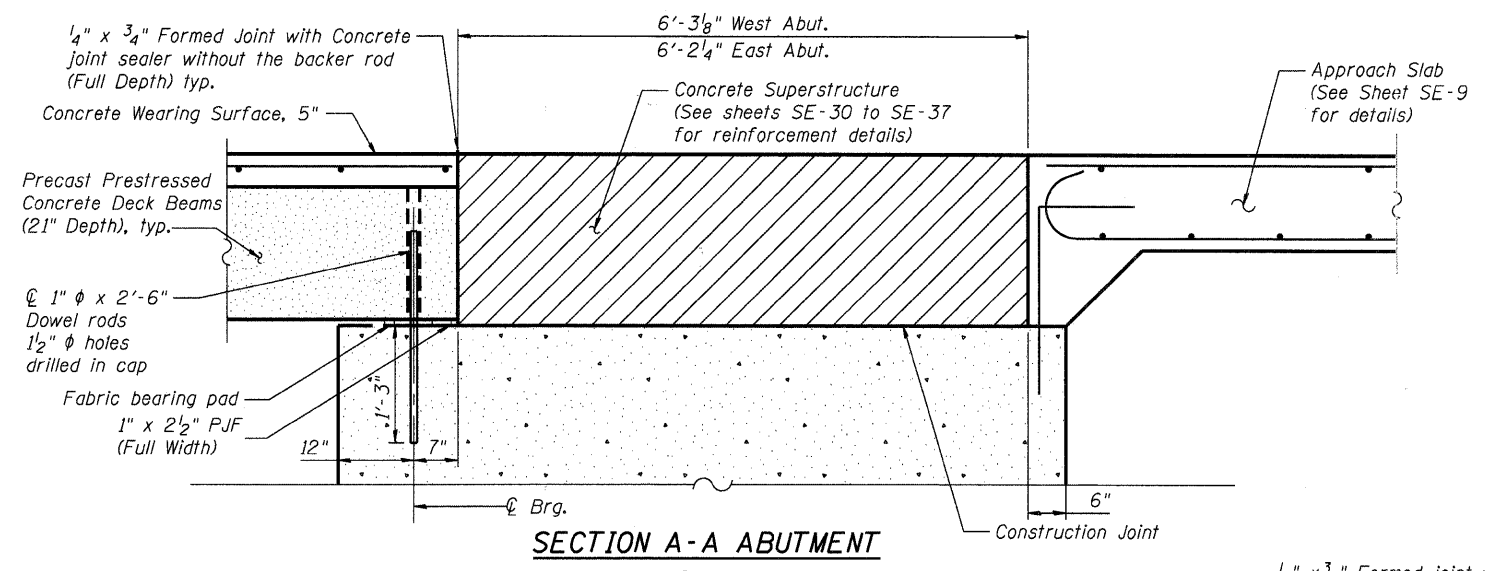
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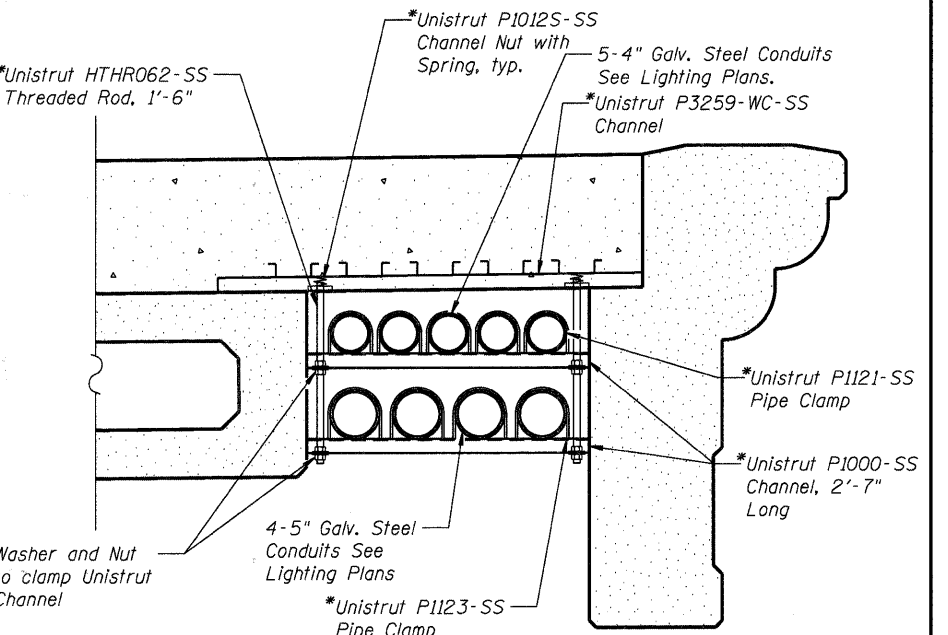
**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**SUPERSTRUCTURE PLAN & CROSS SECTION**  
**STRUCTURE NO. 045-6005**  
SHEET NO. SE-10 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|----------------|--------|--------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164          | 110       |
| CONTRACT NO.              |                |        | 63620        |           |
| ILLINOIS FED. AID PROJECT |                |        |              |           |



**ANTICIPATED CONCRETE WEARING SURFACE PROFILE**  
 (For information only)  
 Thickness is based on calculated camber and deflection of PPC Deck Beams. Actual camber of individual units may vary up to ±1/2". Adjust thickness to match PGL and cross slope.



**DETAIL B BILL OF MATERIALS**

| Bar                              | No. | Size | Length | Shape   |        |
|----------------------------------|-----|------|--------|---------|--------|
| Q500                             | 258 | #4   | 28'-2" | —       |        |
| Q501                             | 320 | #5   | 2'-1"  | —       |        |
| Q502                             | 258 | #4   | 5'-8"  | —       |        |
| Q503                             | 320 | #5   | 10'-4" | —       |        |
| Q504                             | 48  | #5   | 6'-5"  | —       |        |
| Q505                             | 20  | #4   | 3'-6"  | —       |        |
| D500                             | 466 | #5   | 23'-4" | —       |        |
| D501                             | 44  | #5   | 35'-0" | —       |        |
| D502                             | 2   | #4   | 18'-9" | —       |        |
| D503                             | 32  | #4   | 11'-0" | —       |        |
| Concrete Superstructure          |     |      |        | Cu. Yd. | 89.9   |
| Bridge Deck Grooving             |     |      |        | Sq. Yd. | 761    |
| Protective Coat                  |     |      |        | Sq. Yd. | 1,206  |
| Reinforcement Bars, Epoxy Coated |     |      |        | Pound   | 23,550 |
| Bar Splicers                     |     |      |        | Each    | 258    |
| Concrete Wearing Surface, 5"     |     |      |        | Sq. Yd. | 715    |
| Silicone Joint Sealer, 1"        |     |      |        | Foot    | 150    |

Note:  
 \*Unistrut Products and McMaster-Carr (or approved equal) included in the cost for Concrete Superstructure. See Special Provisions for approved equal.

COMPANY NAME: HRGREEN  
 PROJECT CONTACT: Michael G. Harding  
 DATE PLOTTED: 7/26/2011 10:46:45 AM  
 FILE NAME: 8699472-w-SS04.dwg  
 PLOT DRIVER: pdfcut  
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HRGreen.com  
 Illinois Professional Design Firm  
 #184-001322

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| PLOT DATE = 7/26/2011 |

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| DESIGNED - JPC |
| CHECKED - RGD  |
| DRAWN - WJH    |
| CHECKED -      |

|           |
|-----------|
| REVISED - |
| REVISED - |
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| REVISED - |

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

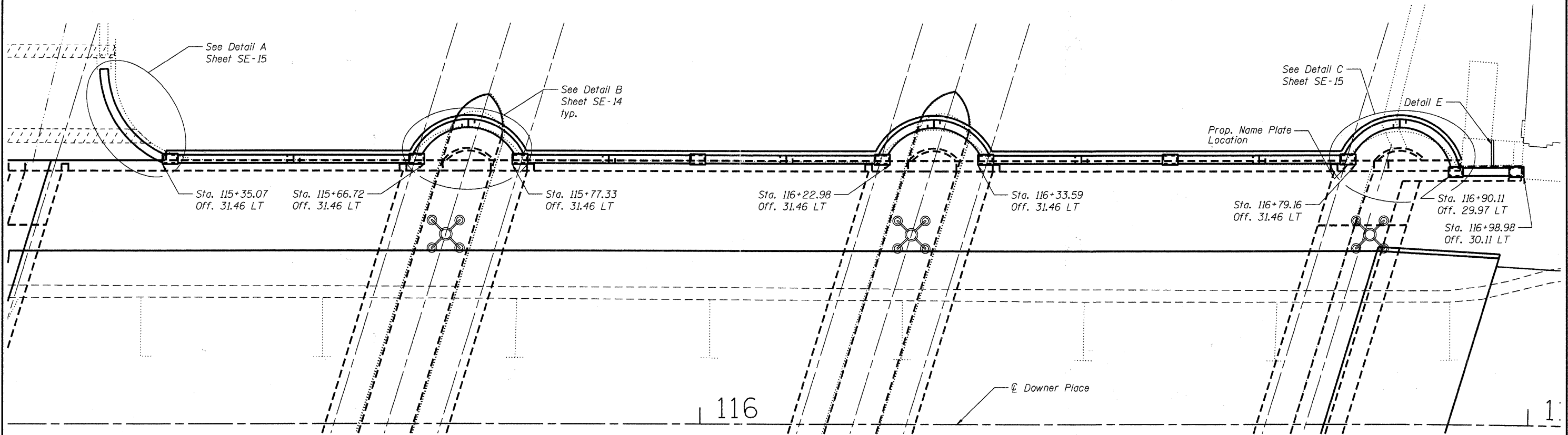
**SUPERSTRUCTURE DETAILS**  
**STRUCTURE NO. 045-6005**  
 SHEET NO. SE-11 OF SE-45 SHEETS

|                    |                |        |                           |           |
|--------------------|----------------|--------|---------------------------|-----------|
| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|                    | 07-00264-00-BR | KANE   | 164                       | 111       |
| CONTRACT NO. 63620 |                |        | ILLINOIS FED. AID PROJECT |           |

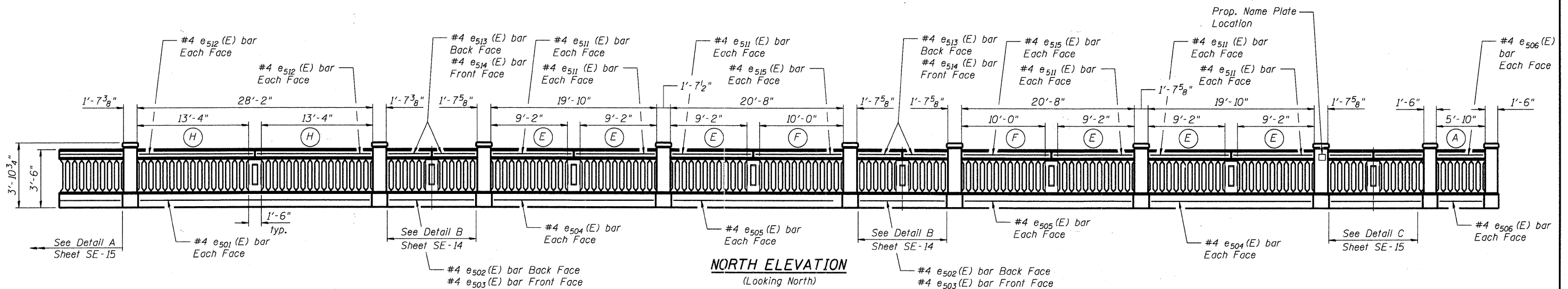
**RAILING NOTES**

- Concrete Bridge Railing (Special) shall consist of furnishing and erecting the cast in place base of rail, span pilasters, pilasters and the precast balusters, top rail, and cap. This work shall include the drilling and epoxy grouting of the d01(E) bars were necessary and the d05(E) balluster bars into the base of rail and rail.
- The precast concrete shall be constructed in accordance with Section 504 of the Standard Specifications.
- The cast in place concrete pilasters and base of rail shall match the concrete finish of the precast members and aggregate type. Contractor shall supply a concrete mix design which is compatible with the precast manufacturer's mix design to ensure uniformity of color and texture on the Concrete Bridge Railing (Special).
- Finish according to Article 503.16 and the Concrete Finishes specification.

| TOP RAIL LENGTHS |             |
|------------------|-------------|
| A                | 6'-5 3/4"   |
| B                | 7'-3 3/4"   |
| C                | 8'-1 3/4"   |
| D                | 8'-11 3/4"  |
| E                | 9'-9 3/4"   |
| F                | 10'-7 3/4"  |
| G                | 11'-5 3/4"  |
| H                | 13'-11 3/4" |



**PLAN**



**NORTH ELEVATION**  
(Looking North)

COMPANY NAME: HRGreen  
 CONTACT: HRGreen, Inc.  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:04:23 AM  
 FILE NAME: 06090412-E-railing.dwg  
 PLOT DRIVER: pcf.plt  
 PEN TABLE: Struct 22x34.tbl



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 PLOT DATE = 7/26/2011

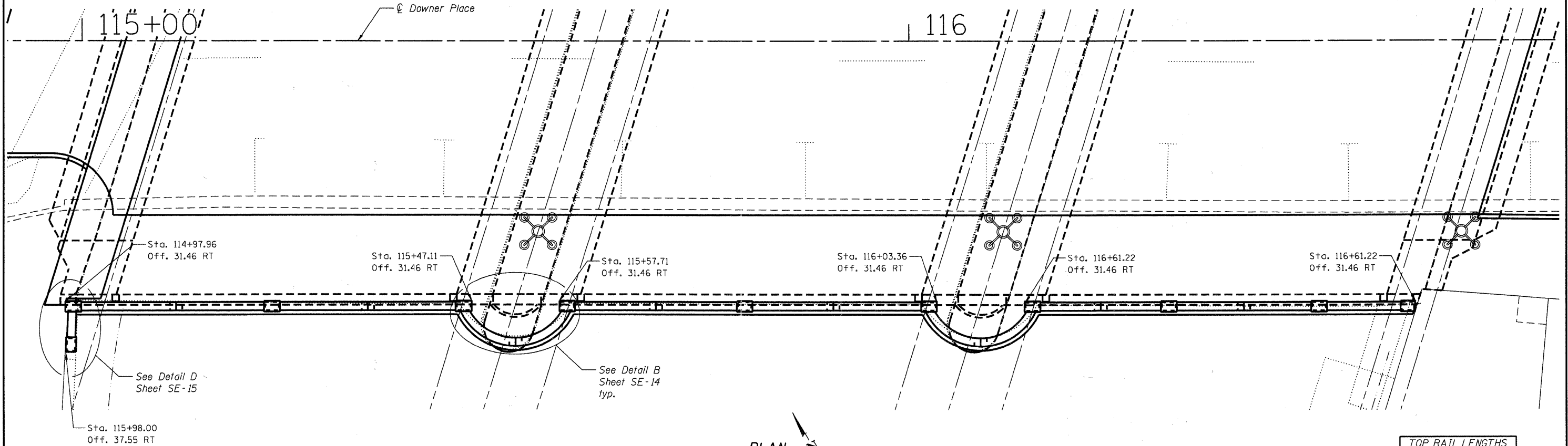
DESIGNED - JPG  
 CHECKED - RGD  
 DRAWN - WJH  
 CHECKED -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

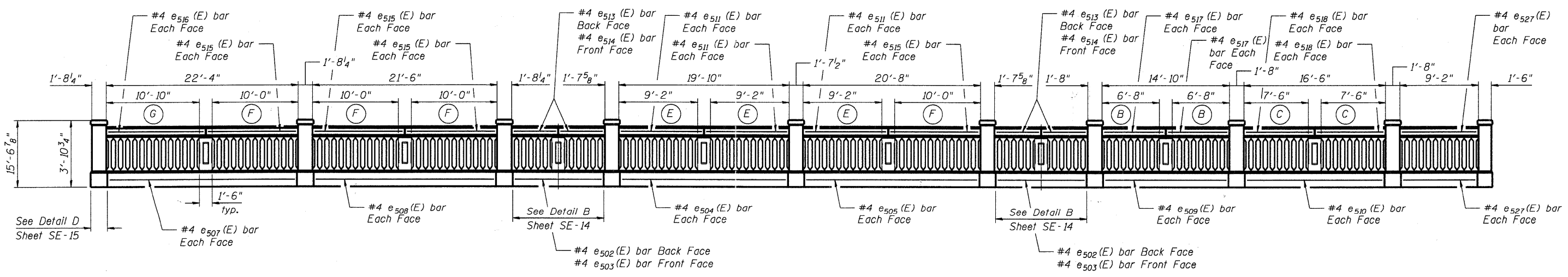
**CONCRETE RAILING DETAILS**  
**STRUCTURE NO. 045-6005**  
 SHEET NO. SE-12 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|----------------|--------|--------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164          | 112       |
| CONTRACT NO. 63620        |                |        |              |           |
| ILLINOIS FED. AID PROJECT |                |        |              |           |



PLAN

| TOP RAIL LENGTHS |             |
|------------------|-------------|
| A                | 6'-5 3/4"   |
| B                | 7'-3 3/4"   |
| C                | 8'-1 3/4"   |
| D                | 8'-11 3/4"  |
| E                | 9'-9 3/4"   |
| F                | 10'-7 3/4"  |
| G                | 11'-5 3/4"  |
| H                | 13'-11 3/4" |



**SOUTH ELEVATION**  
(Looking North)

HRGreen  
Company Name: HRGreen  
Project Name: Downer Place  
Date Plotted: 7/26/2011 10:06:31 AM  
File Name: 8650412-E-Rail02.dgn  
Plot Driver: pdfplot  
Pen Table: Struct 22x34.tbl



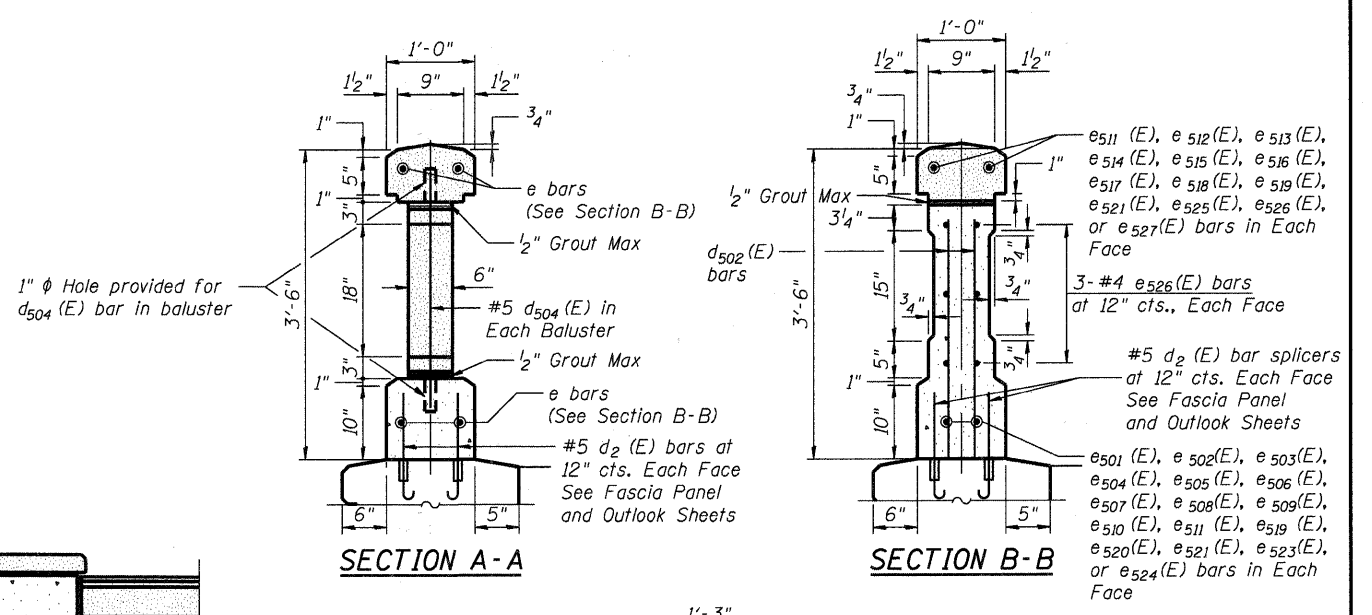
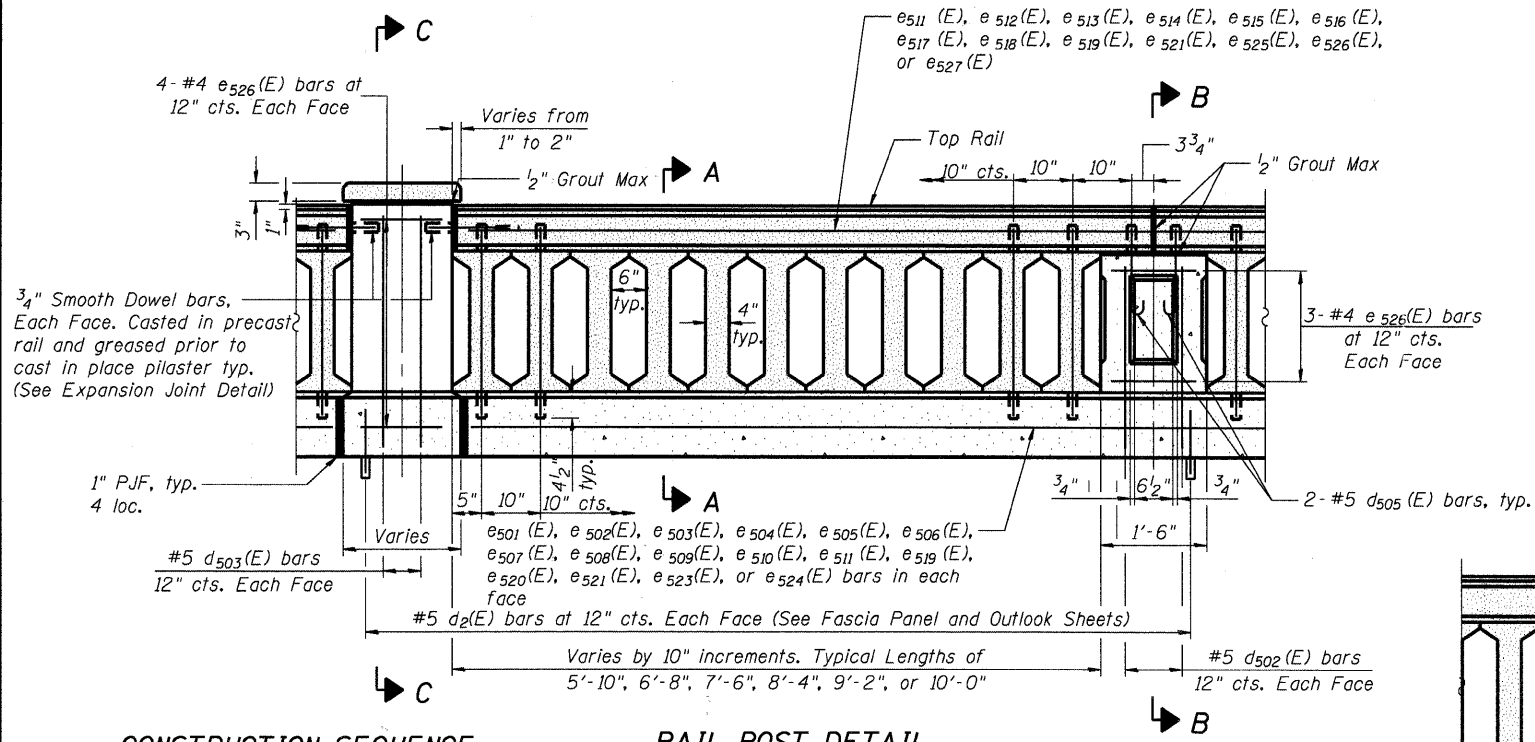
USER NAME = whood  
PLOT SCALE = N.T.S.  
PLOT DATE = 7/26/2011

DESIGNED - JPG  
CHECKED - RGD  
DRAWN - WJH  
CHECKED -  
REVISED -  
REVISED -  
REVISED -

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**CONCRETE RAILING DETAILS**  
**STRUCTURE NO. 045-6005**  
SHEET NO. SE-13 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|----------------|--------|--------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164          | 113       |
| CONTRACT NO. 63620        |                |        |              |           |
| ILLINOIS FED. AID PROJECT |                |        |              |           |

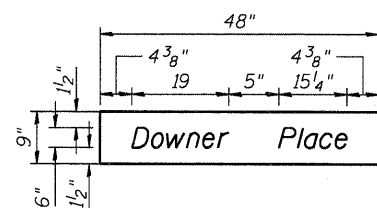


**CONSTRUCTION SEQUENCE**

**LEGEND**

- Sequence 1: Cast-in-Place Concrete
- Sequence 2: Precast Concrete
- Sequence 3: Cast-in-Place Concrete

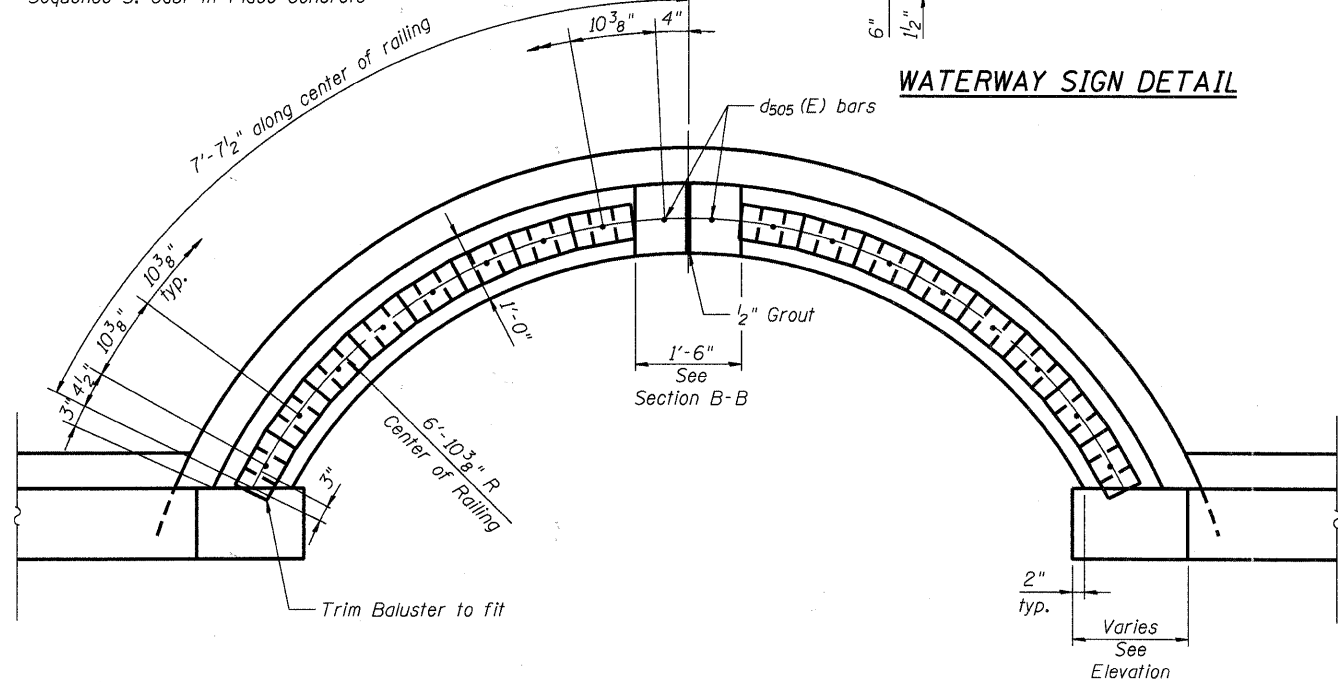
**RAIL POST DETAIL**



**WATERWAY SIGN**

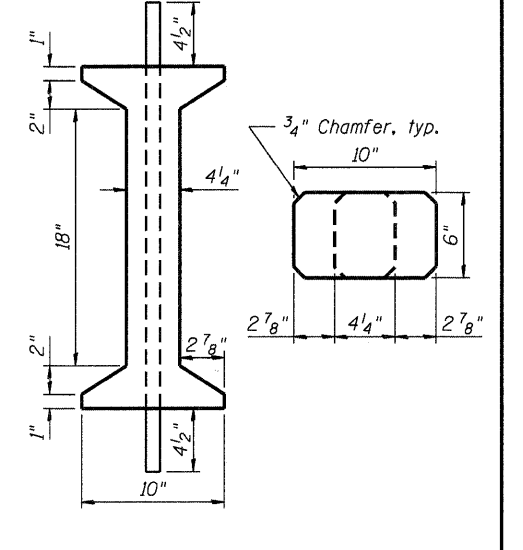
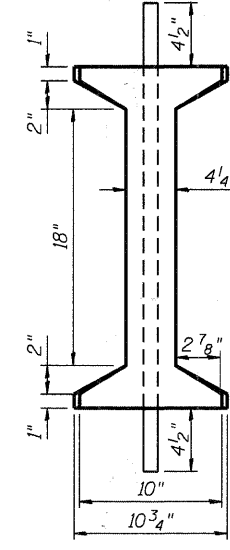
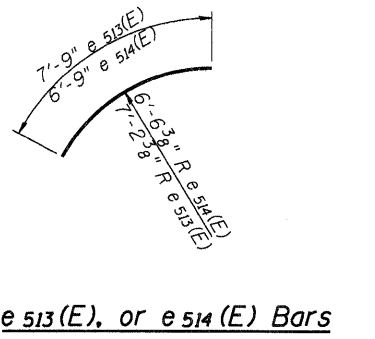
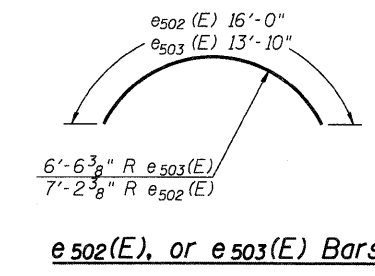
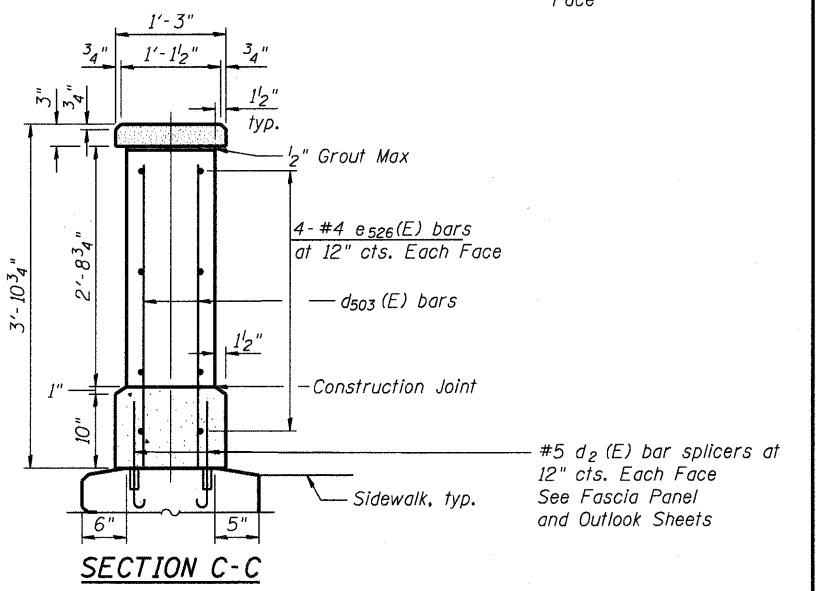
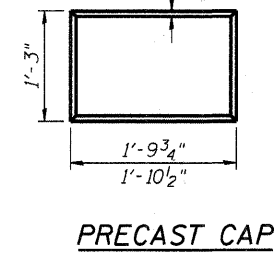
Sign shall be provided according to Section 720 of the Standard Specifications. Connection to be approved by the Engineer. Cost included in Concrete Bridge Railing (Special)

**WATERWAY SIGN DETAIL**



**MINIMUM BAR LAP**

- #4 bar = 2'-1"
- #5 bar = 2'-7"



HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:04:36 AM  
 FILE NAME: 86090472-E-Rail03.dgn  
 PLOT DRIVER: pdL.plt  
 PEN TABLE: Struct 22x34.tbl

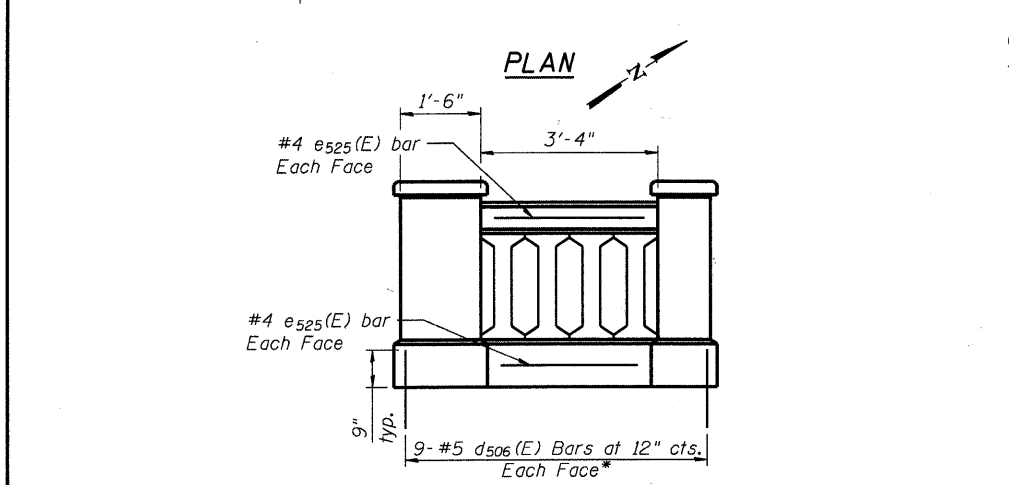
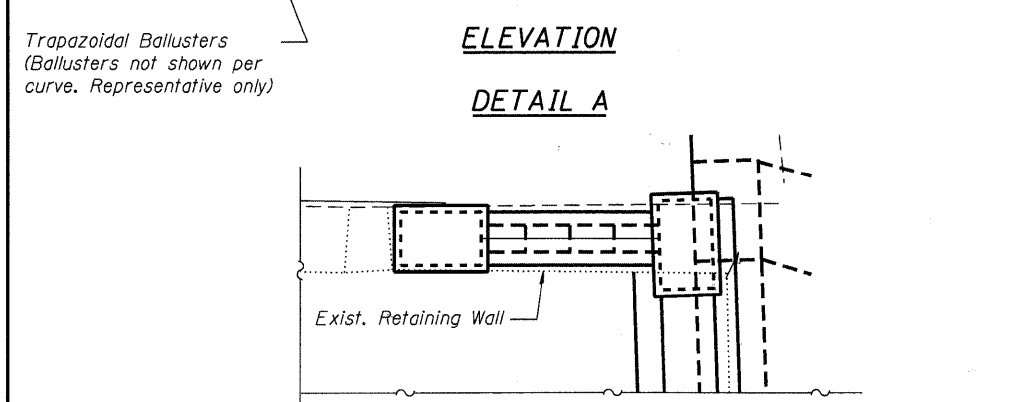
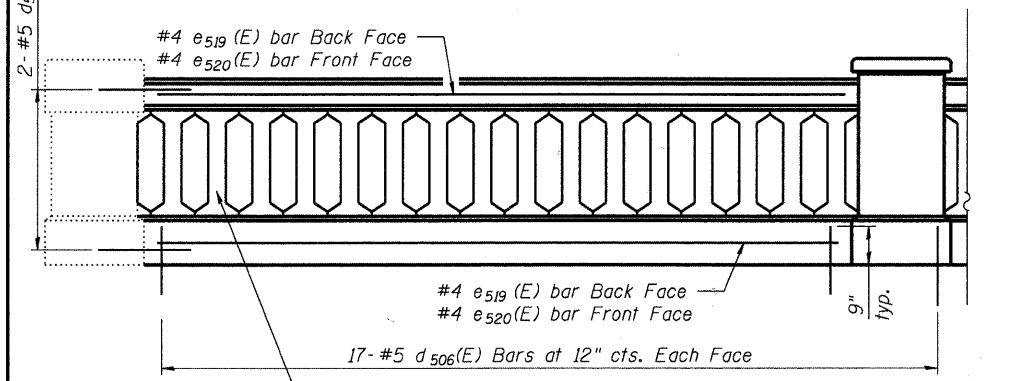
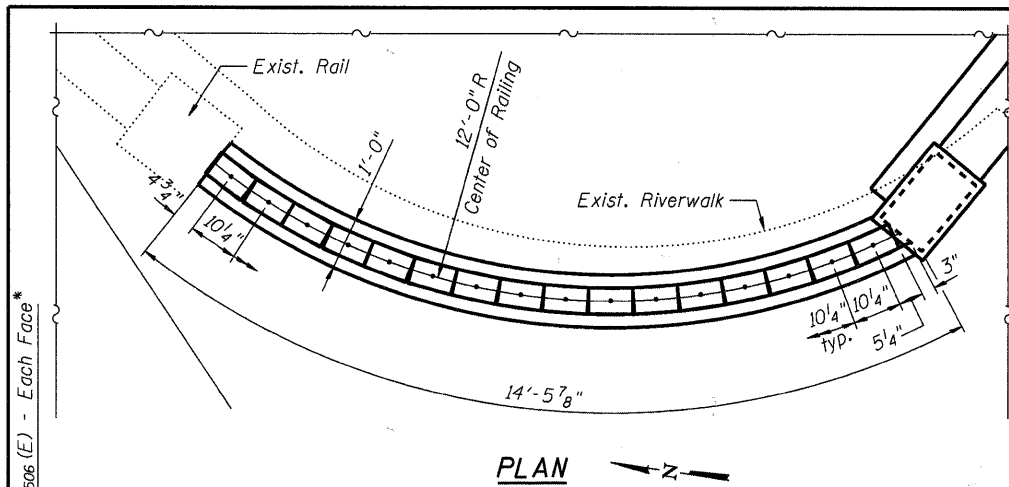


|                       |                |           |
|-----------------------|----------------|-----------|
| USER NAME = mhoard    | DESIGNED - JPG | REVISED - |
| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

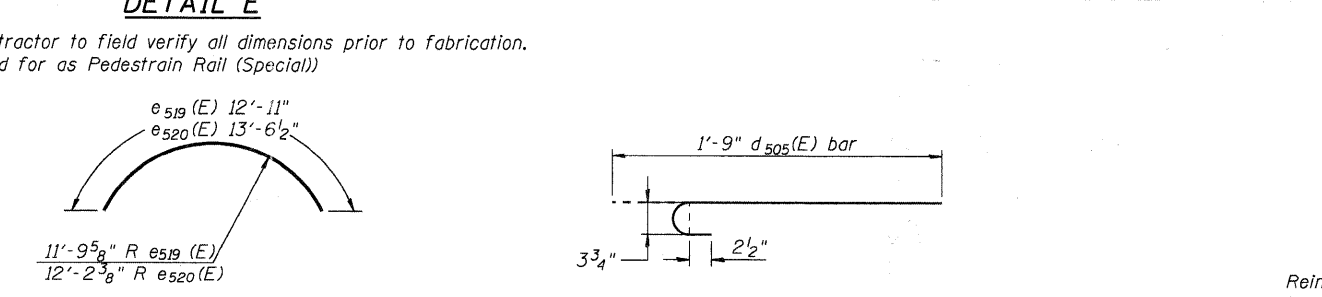
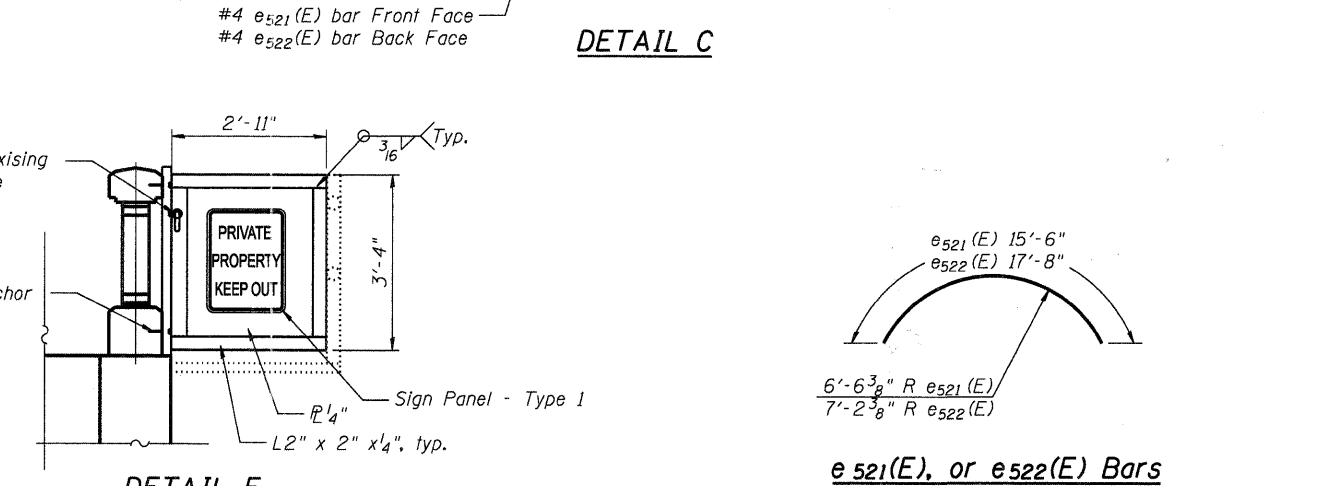
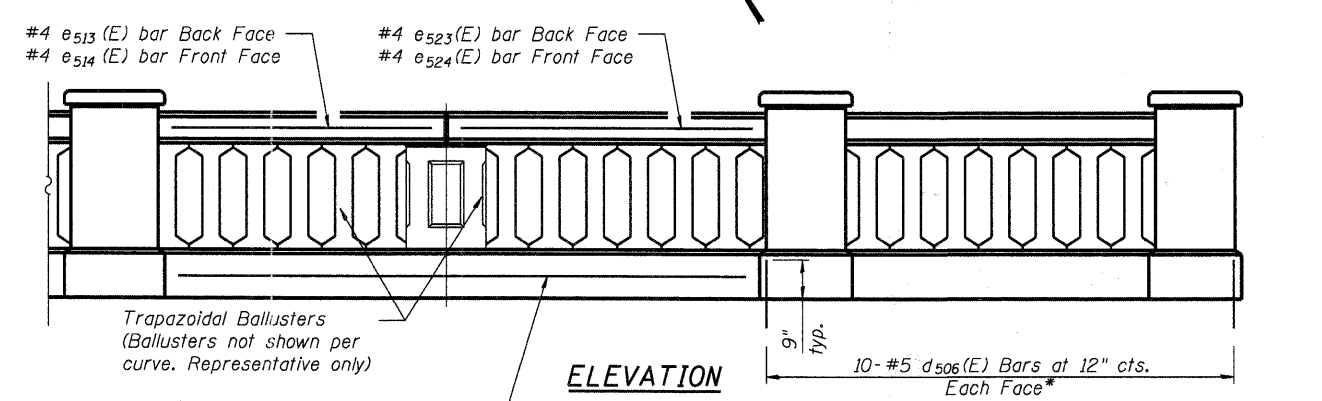
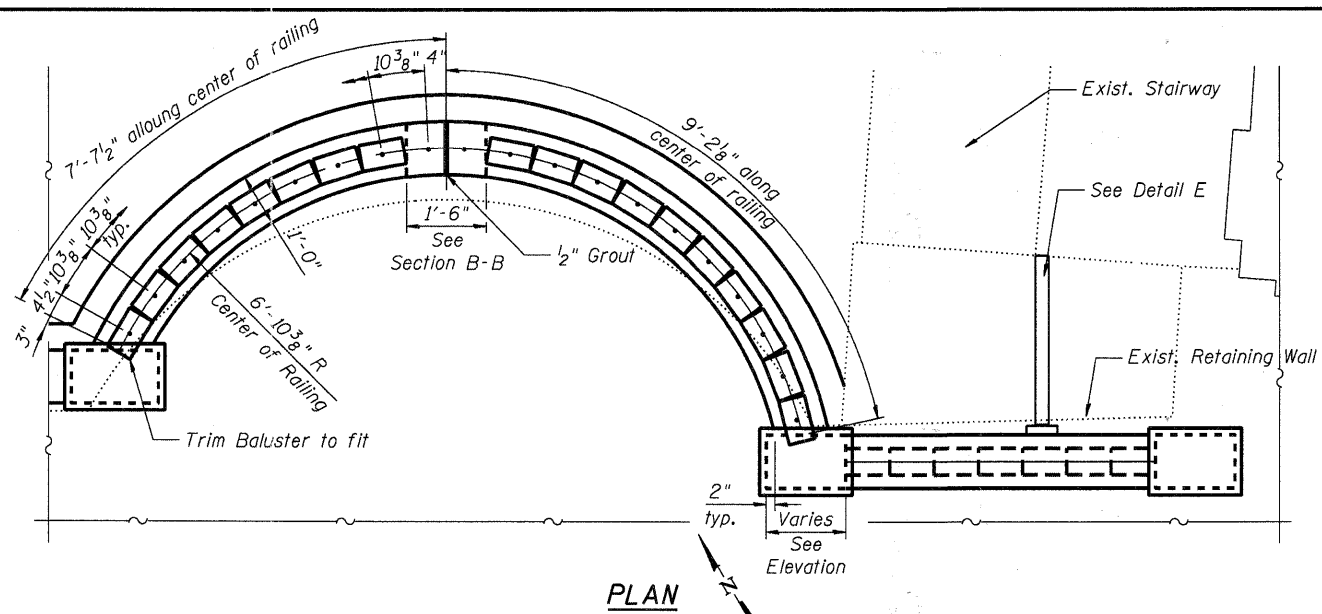
**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**CONCRETE RAILING DETAILS**  
**STRUCTURE NO. 045-6005**  
 SHEET NO. SE-14 OF SE-45 SHEETS

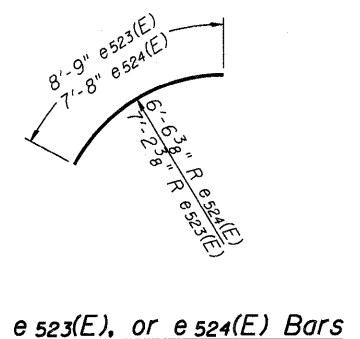
| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|----------------|--------|--------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164          | 114       |
| CONTRACT NO. 63620        |                |        |              |           |
| ILLINOIS FED. AID PROJECT |                |        |              |           |



**ELEVATION DETAIL D**



**e 519 (E), or e 520 (E) Bars**



**e 523 (E), or e 524 (E) Bars**

**BILL OF MATERIALS**

| Bar No.                          | Size   | Length  | Shape |       |
|----------------------------------|--------|---------|-------|-------|
| d502 (E)                         | 64 #5  | 2'-8"   | —     |       |
| d503 (E)                         | 84 #5  | 3'-5"   | —     |       |
| d504 (E)                         | 369 #5 | 2'-9"   | —     |       |
| d505 (E)                         | 32 #5  | 1'-9"   | —     |       |
| d506 (E)                         | 72 #5  | 1'-6"   | —     |       |
| e501 (E)                         | 2 #4   | 27'-10" | —     |       |
| e502 (E)                         | 4 #4   | 16'-0"  | —     |       |
| e503 (E)                         | 4 #4   | 13'-10" | —     |       |
| e504 (E)                         | 6 #4   | 19'-6"  | —     |       |
| e505 (E)                         | 6 #4   | 20'-4"  | —     |       |
| e506 (E)                         | 2 #4   | 5'-6"   | —     |       |
| e507 (E)                         | 2 #4   | 22'-0"  | —     |       |
| e508 (E)                         | 2 #4   | 21'-2"  | —     |       |
| e509 (E)                         | 2 #4   | 14'-6"  | —     |       |
| e510 (E)                         | 2 #4   | 16'-2"  | —     |       |
| e511 (E)                         | 18 #4  | 9'-5"   | —     |       |
| e512 (E)                         | 4 #4   | 13'-7"  | —     |       |
| e513 (E)                         | 9 #4   | 7'-9"   | —     |       |
| e514 (E)                         | 9 #4   | 6'-9"   | —     |       |
| e515 (E)                         | 12 #4  | 10'-3"  | —     |       |
| e516 (E)                         | 2 #4   | 11'-1"  | —     |       |
| e517 (E)                         | 4 #4   | 6'-11"  | —     |       |
| e518 (E)                         | 4 #5   | 7'-9"   | —     |       |
| e519 (E)                         | 2 #4   | 12'-10" | —     |       |
| e520 (E)                         | 2 #4   | 14'-0"  | —     |       |
| e521 (E)                         | 1 #4   | 15'-6"  | —     |       |
| e522 (E)                         | 1 #4   | 17'-8"  | —     |       |
| e523 (E)                         | 1 #4   | 8'-9"   | —     |       |
| e524 (E)                         | 1 #4   | 7'-8"   | —     |       |
| e525 (E)                         | 4 #4   | 3'-0"   | —     |       |
| e526 (E)                         | 132 #4 | 1'-2"   | —     |       |
| e527 (E)                         | 4 #4   | 8'-10"  | —     |       |
| Reinforcement Bars, Epoxy Coated |        |         | Pound | 2,678 |
| Concrete Bridge Railing          |        |         | Ft.   | 367   |
| Pedestrian Rail (Special)        |        |         | Ft.   | 3     |

Reinforcement bars given for information only. Included in cost for Concrete Bridge Railing (Special).  
\* Epoxy Grout d506 (E) bars according to Section 584 of the Standard Specifications.

COMPANY NAME: HRGreen  
CONTACT: HRGreen  
CLIENT: City of Aurora  
DATE PLOTTED: 7/26/2011 11:04:50 AM  
FILE NAME: 86090412-E-Rail04.dgn  
PLOT DRIVER: pdfplot  
PEN TABLE: Struct 22x34.tbl

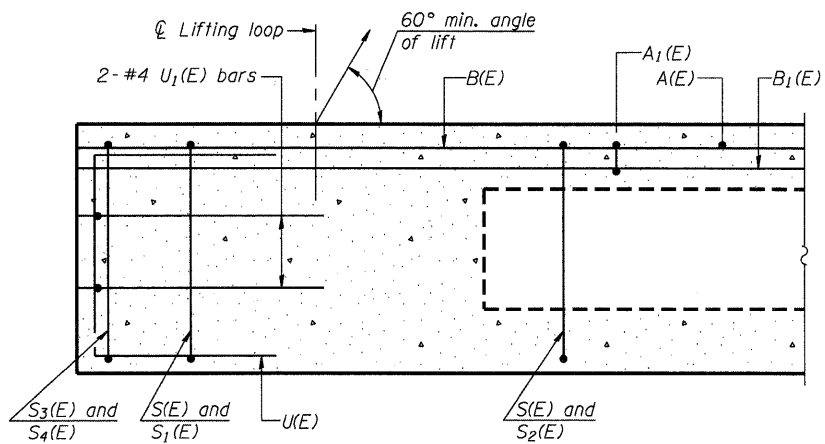
**HRGreen.com**  
Illinois Professional Design Firm  
#184-001322

|                       |                |           |
|-----------------------|----------------|-----------|
| USER NAME = whoold    | DESIGNED - JPG | REVISED - |
| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

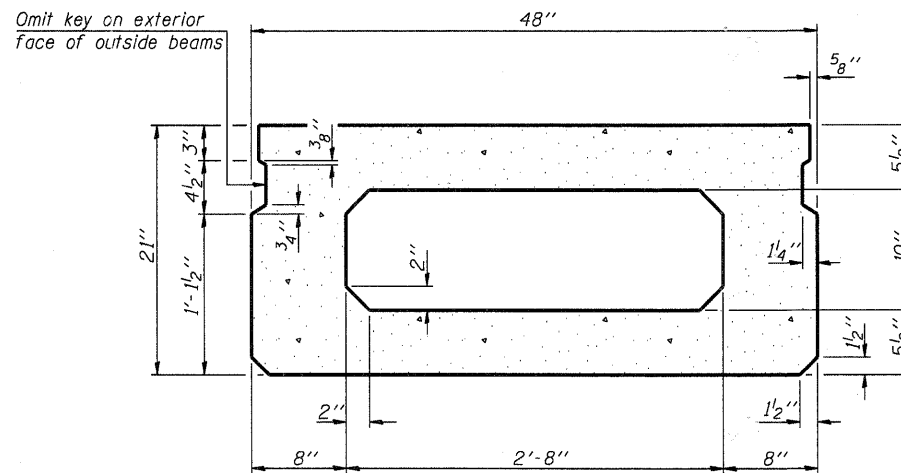
**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH OF THE FOX RIVER**

**CONCRETE RAILING DETAILS**  
**STRUCTURE NO. 045-6005**  
SHEET NO. SE-15 OF SE-45 SHEETS

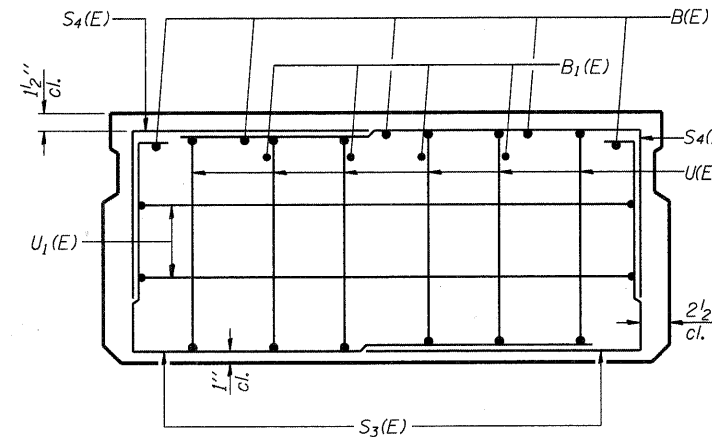
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| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|                           | 07-00264-00-BR | KANE   | 164          | 115       |
| CONTRACT NO. 63620        |                |        |              |           |
| ILLINOIS FED. AID PROJECT |                |        |              |           |



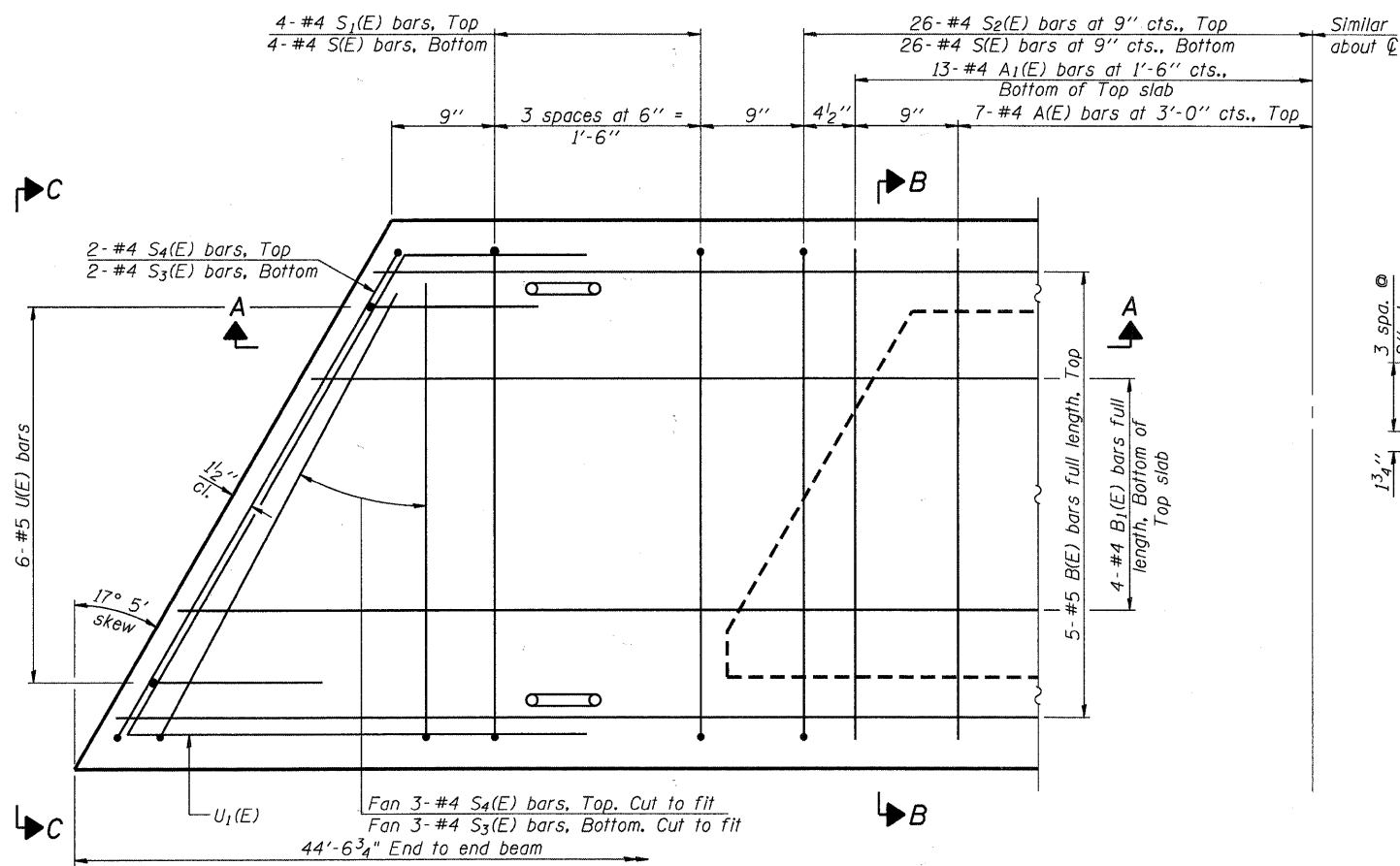
**SECTION A-A**



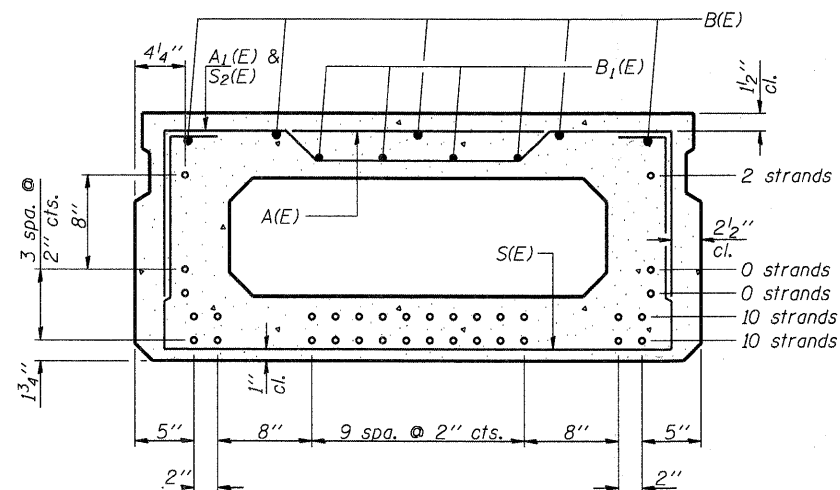
**SECTION B-B**  
(Showing dimensions)



**VIEW C-C**



**PLAN VIEW**



**SECTION B-B**

(Showing reinforcement and permissible strand locations)  
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

**BAR LIST**  
**ONE BEAM ONLY**  
(For information only)

| Bar   | No. | Size | Length | Shape |
|-------|-----|------|--------|-------|
| A(E)  | 14  | #4   | 3'-7"  | —     |
| A1(E) | 26  | #4   | 3'-10" | —     |
| B(E)  | 5   | #5   | 44'-0" | —     |
| B1(E) | 4   | #4   | 44'-0" | —     |
| S(E)  | 60  | #4   | 7'-5"  | □     |
| S1(E) | 8   | #4   | 5'-11" | □     |
| S2(E) | 52  | #4   | 6'-2"  | □     |
| S3(E) | 5   | #4   | 5'-0"  | □     |
| S4(E) | 5   | #4   | 4'-3"  | □     |
| U(E)  | 12  | #5   | 4'-0"  | □     |
| U1(E) | 4   | #4   | 7'-3"  | □     |

Note: See next sheet for additional details and Bill of Material.

**MINIMUM BAR LAP**

#4 bar = 2'-0"  
#5 bar = 2'-6"

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

COMPANY NAME: HRGreen  
PROJECT CONTACT: Mark G. Harding  
CLIENT: City of Aurora  
DATE PLOTTED: 7/26/2011 10:04:54 AM  
FILE NAME: 86599472-E-Pb001.dgn  
PLOT DRIVER: pdf.plt  
PEN TABLE: Struct 22x34.tbl

PD-2148-L

7-1-10



|                       |                |           |
|-----------------------|----------------|-----------|
| USER NAME = whoad     | DESIGNED - JPC | REVISED - |
| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

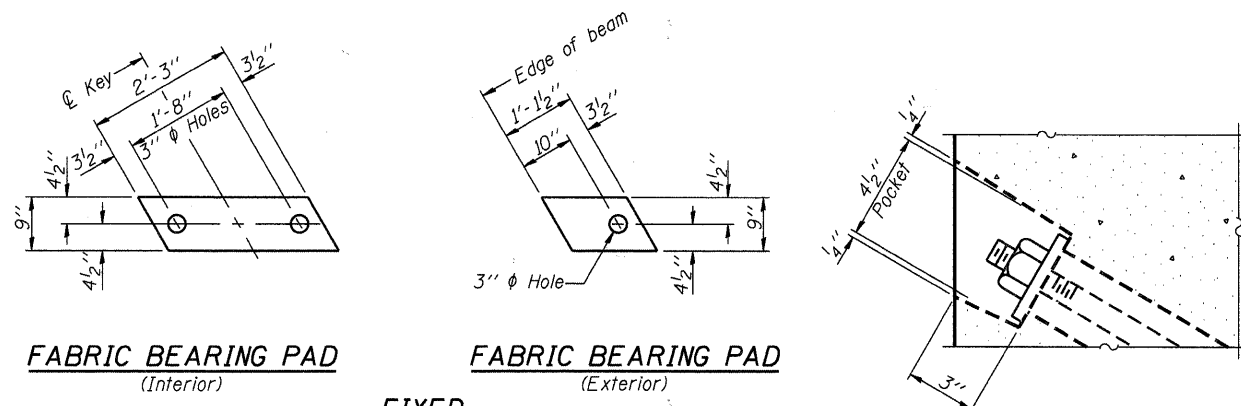
**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**21"X48" PPC DECK BEAM**  
**STRUCTURE NO. 045-6005**

SHEET NO. SE-16 OF SE-45 SHEETS

| F.A. RTE.                   | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO.          |
|-----------------------------|----------------|--------|--------------|--------------------|
|                             | 07-00264-00-BR | KANE   | 164          | 116                |
|                             |                |        |              | CONTRACT NO. 63620 |
| [ILLINOIS] FED. AID PROJECT |                |        |              |                    |





**FABRIC BEARING PAD**  
(Interior)

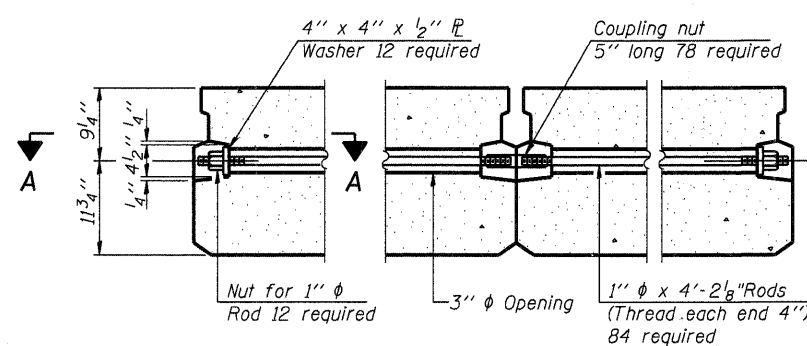
**FABRIC BEARING PAD**  
(Exterior)

**FIXED**

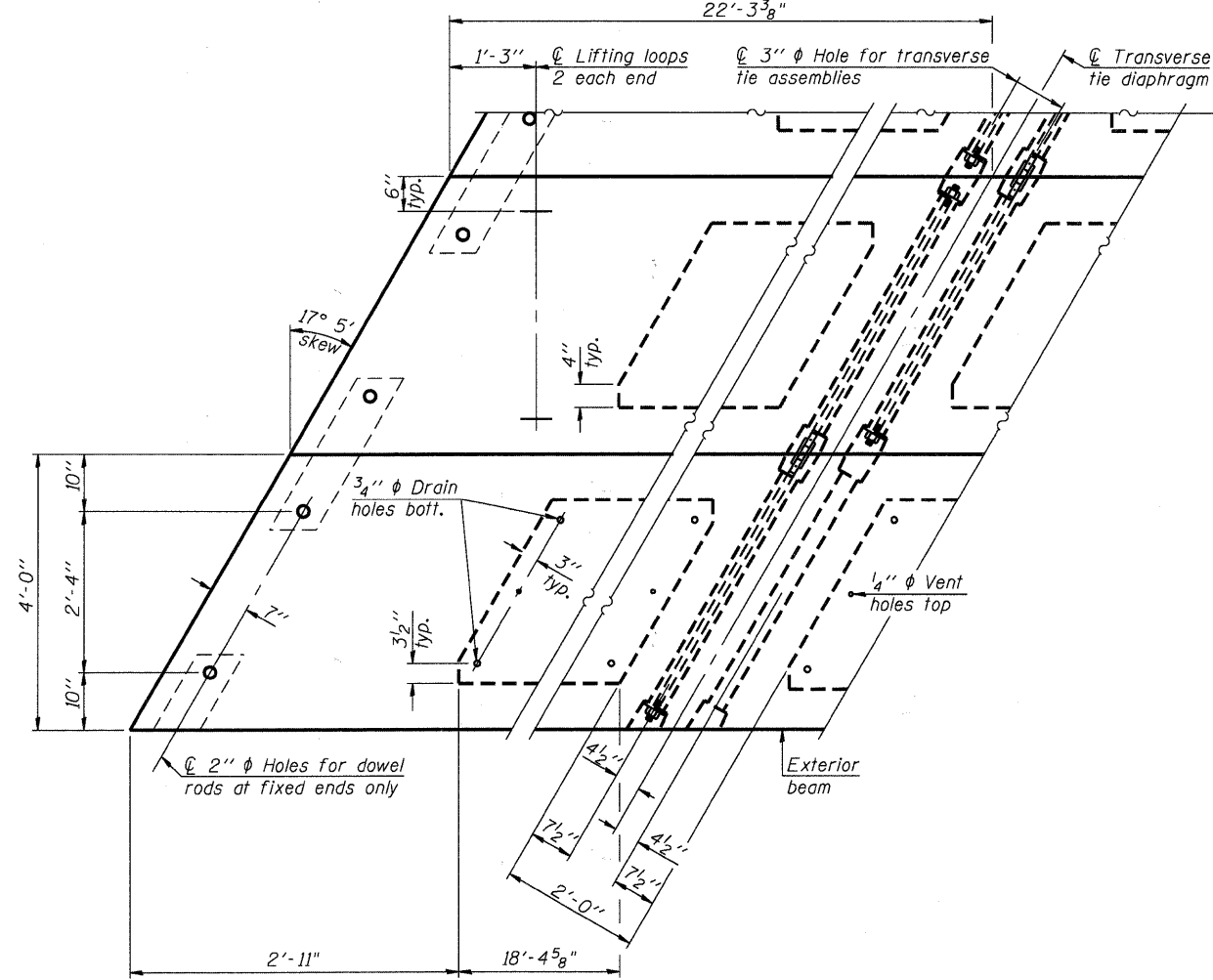
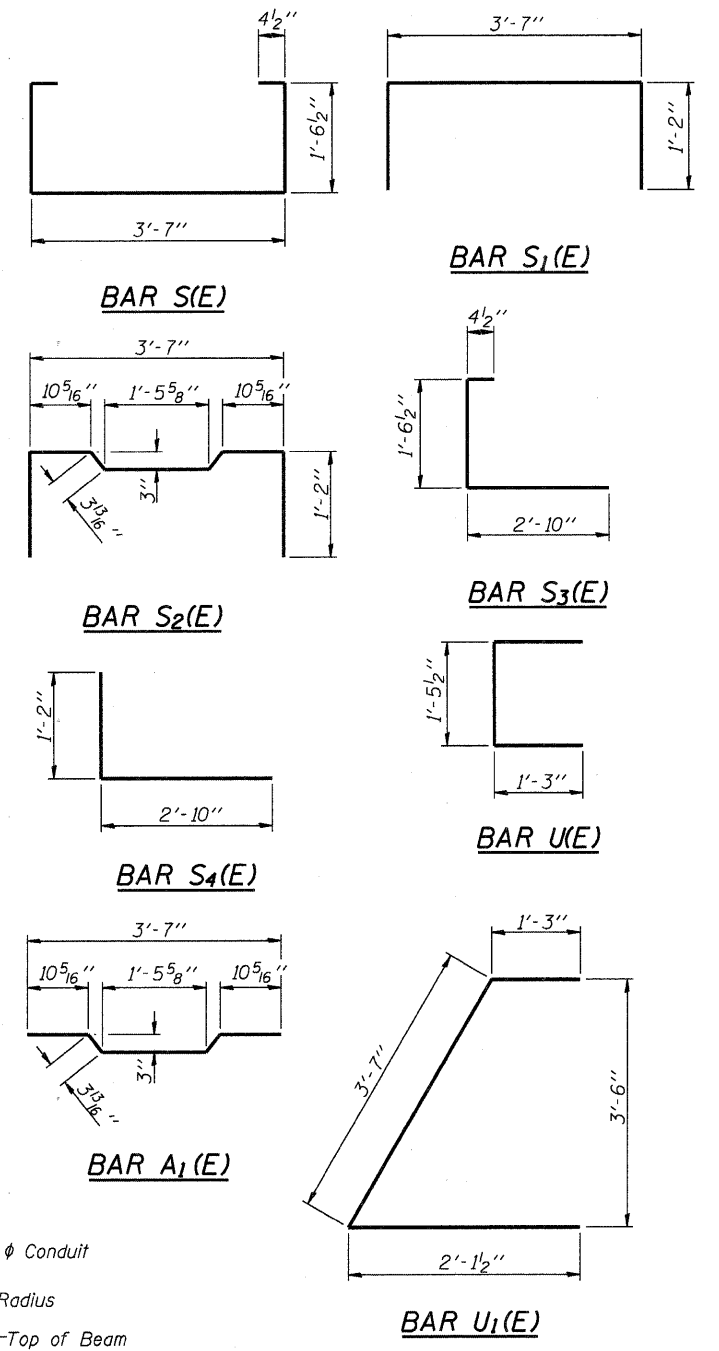
**SECTION A-A**

Notes:

All bearing pads shall be 1" thick.  
Omit holes when using expansion bearings.  
Expansion bearing pad shall be bonded to the substructure.



**TYPICAL TRANSVERSE TIE ASSEMBLY**

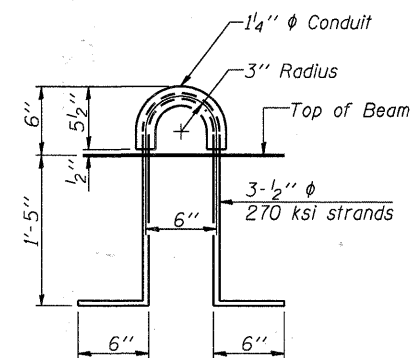


**PLAN VIEW**

Note: Connect beams in pairs with the transverse tie configuration shown.

**NOTES**

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.  
Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).  
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.  
A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.  
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.  
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.  
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.



**LIFTING LOOP DETAIL**

**BILL OF MATERIAL**

|   |         |       |
|---|---------|-------|
| Precast Prestressed Conc. Deck Bms. (21" depth) | Sq. Ft. | 7,486 |
|---|---------|-------|

HRGREEN  
Company Name: Hrgreen, Inc.  
Project Contact: Hrgreen, Inc.  
Date Plotted: 7/26/2011 11:05:01 AM  
File Name: 86090472-E-ppad02.dgn  
Plot Driver: pdfplot  
Pen Table: Struct 22x34.tbl

PD-2148-LD

7-1-10



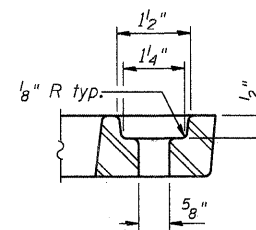
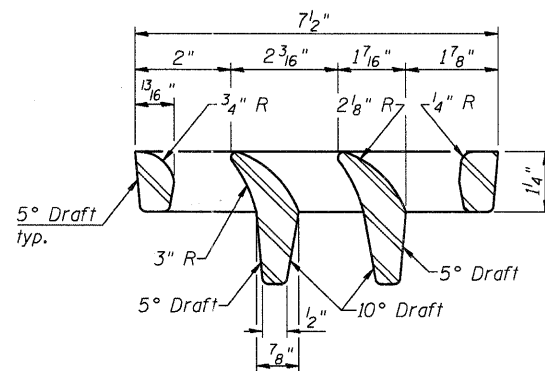
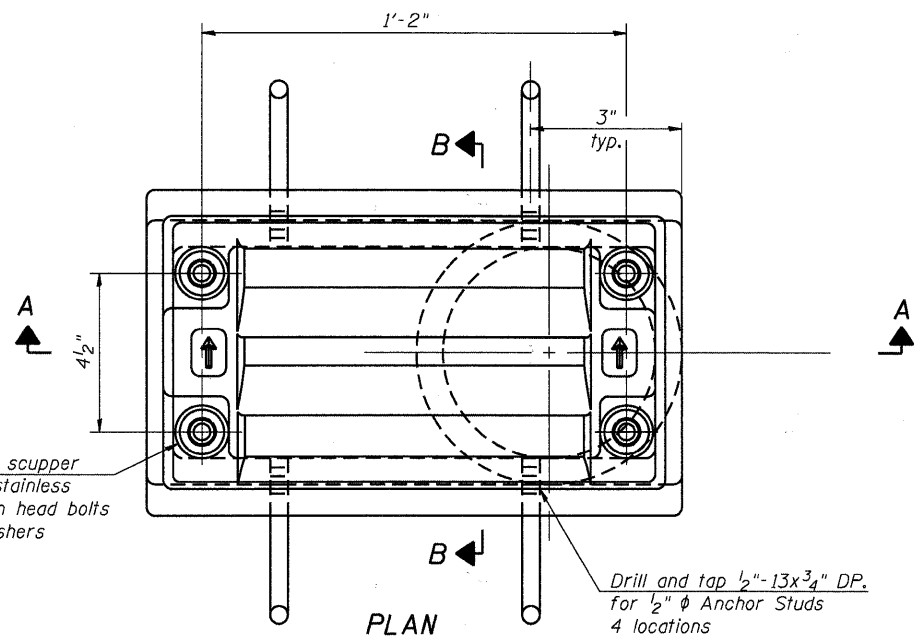
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| USER NAME = whood     | DESIGNED - JPC | REVISED - |
| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**21"X48" PPC DECK BEAM DETAILS**  
**STRUCTURE NO. 045-6005**

SHEET NO. SE-17 OF SE-45 SHEETS

| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS                | SHEET NO. |
|--------------------|----------------|--------|-----------------------------|-----------|
|                    | 07-00264-00-BR | KANE   | 164                         | 117       |
| CONTRACT NO. 63620 |                |        | [ILLINOIS] FED. AID PROJECT |           |



Notes:  
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.  
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

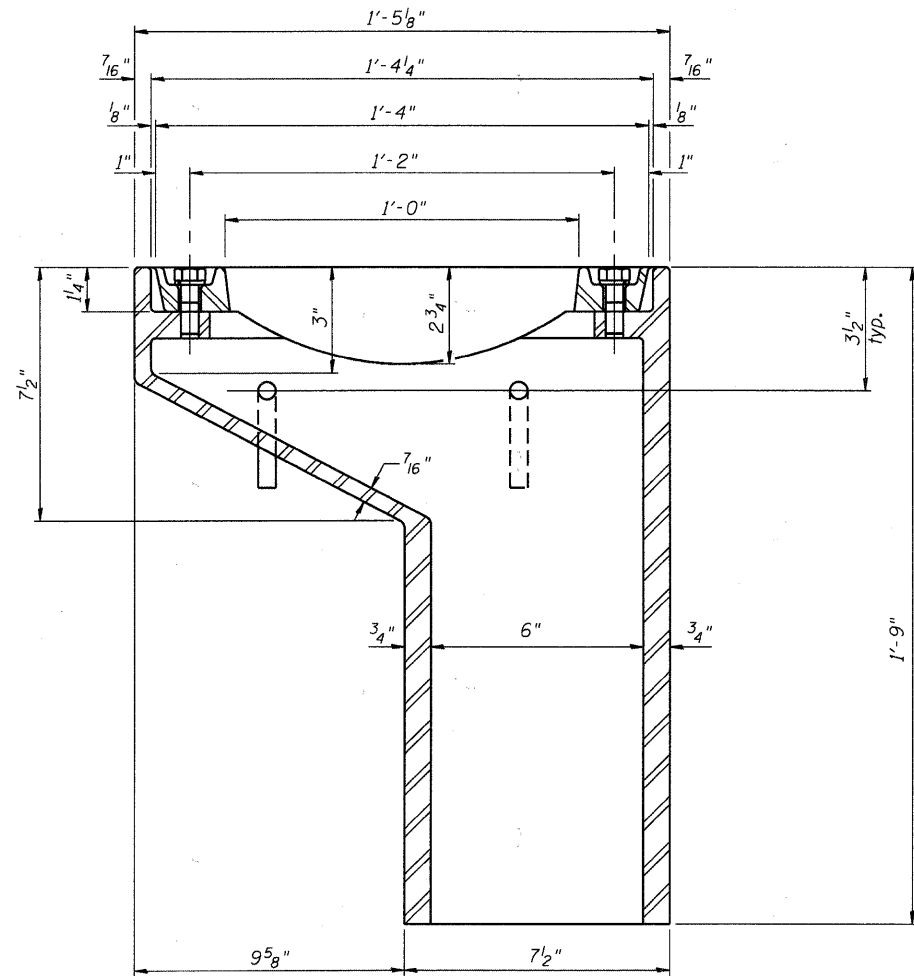
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

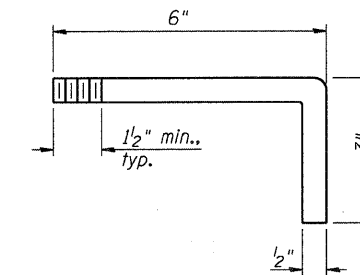
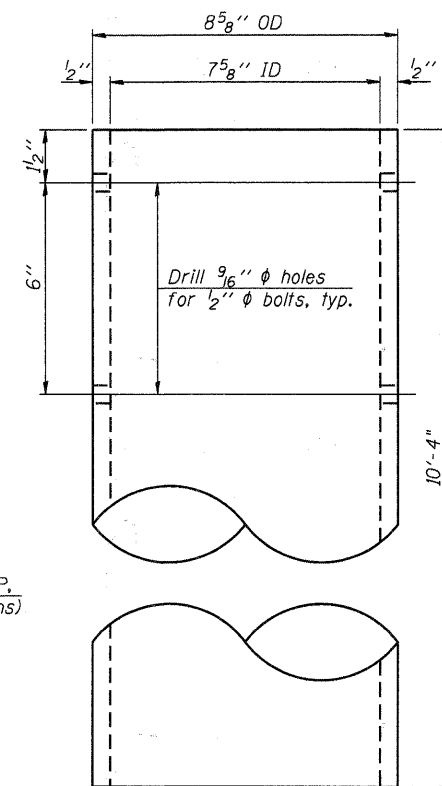
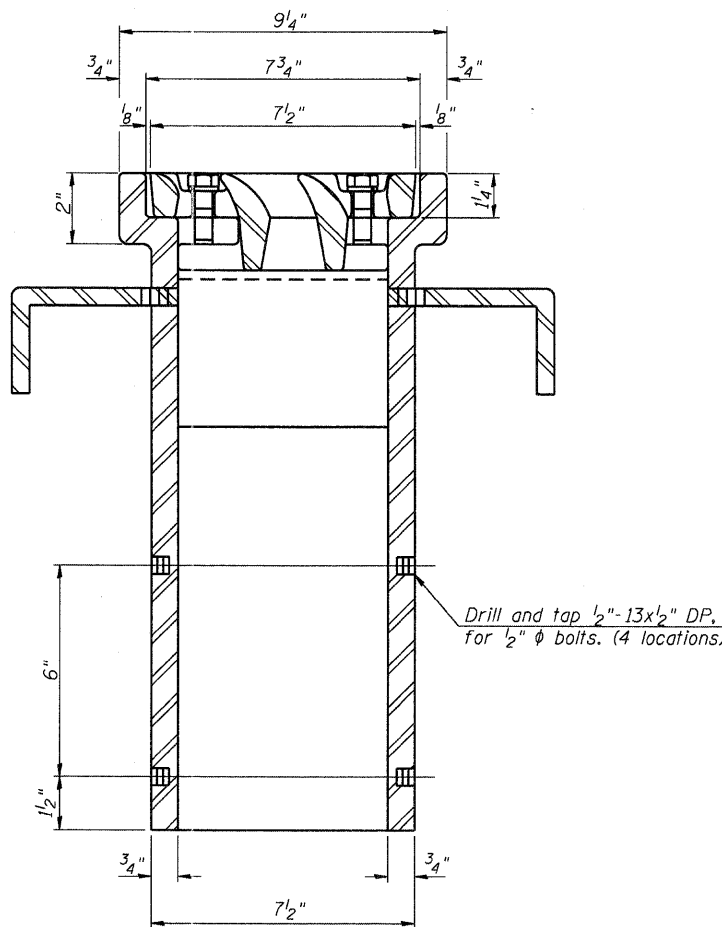
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



See sheet SE-10 for scupper location relative to curb.



**ANCHOR STUD DETAIL**

**BILL OF MATERIAL**

| ITEM                    | UNIT | QUANTITY |
|-------------------------|------|----------|
| Drainage Scupper, DS-11 | Each | 2        |

HRGreen  
 PROJECT CONTACT: Michael G. Harshbarger  
 DATE PLOTTED: 7/26/2011 11:05:05 AM  
 FILE NAME: 86090472-E-Scupper.dgn  
 PLOT DRIVER: pdfPlot  
 PEN TABLE: Struct 22x34.tbl

DS-11

7-1-10



USER NAME = whoood  
 PLOT SCALE = N.T.S.  
 PLOT DATE = 7/26/2011

DESIGNED - MGH  
 CHECKED - RGD  
 DRAWN - WJH  
 CHECKED -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**CITY OF AURORA  
 DOWNER PLACE OVER THE EAST BRANCH  
 OF THE FOX RIVER**

**DRAINAGE SCUPPER, DS-11  
 STRUCTURE NO. 045-6005**

SHEET NO. SE-18 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---------------------------|----------------|--------|--------------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164                | 118       |
|                           |                |        | CONTRACT NO. 63620 |           |
| ILLINOIS FED. AID PROJECT |                |        |                    |           |

**GENERAL NOTES - PRECAST CONCRETE**

**Materials:**

1. All precast modules shall be manufactured with class PC concrete according to Section 504, Article 1042.02, Article 1042.03 and the following requirements:
  - a. Lightweight coarse aggregates according to ASTM C330 shall be used such that the maximum cured density shall be 120 lbs./cu. ft. (ASTM C567).
  - b. The minimum 28-day compressive strength shall be 5,000 psi.
2. Reinforcing steel shall be according to Article 1006.10(a)(2). Welded steel wire fabric shall be according to Article 1006.10(b)(1).
3. Steel inserts shall be galvanized according to AASHTO M 232 or AASHTO M11 as applicable and have the following safe working load capacities:
  - a. F41 Wingwall Anchor, 1" diameter x 8":
    - i. Tension: 10,711 lbs.
    - ii. Shear: 5,400 lbs.
  - b. F-42 Loop Ferrule Insert, 3/4" diameter:
    - i. Tension: 2,200 lbs.
    - ii. Shear: 2,200 lbs.
  - c. F-57 Expanded Coil Ferrule Insert, 3/4" diameter:
    - i. Tension: 4,250 lbs.
    - ii. Shear: 2,450 lbs.
  - d. F-62 Flared Thin-Slab Ferrule Insert, 3/4" diameter bolt x 3 5/8" high:
    - i. Tension: 3,300 lbs.
    - ii. Shear: 3,300 lbs.
  - e. D-108-A Headed Dowel Bar Insert, 3/4" diameter to #5 bar x 9" long:
    - i. Tension: 6,975 lbs.
    - ii. Shear: 4,440 lbs.

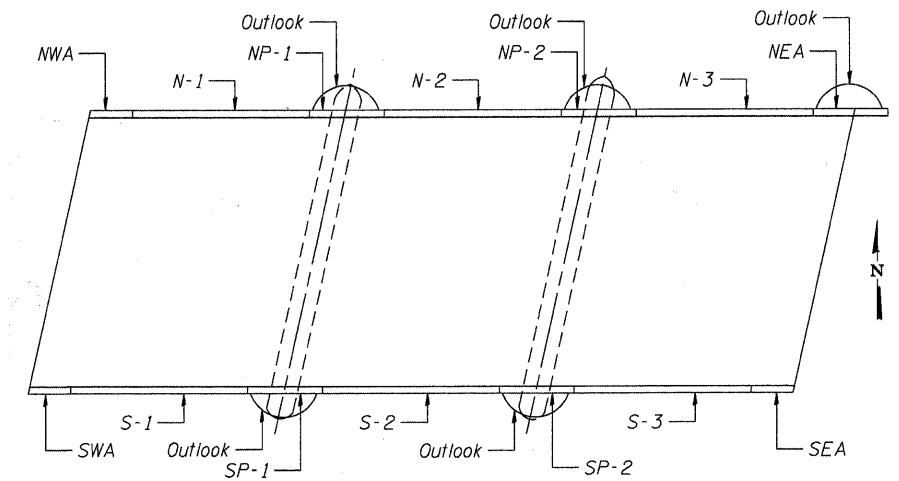
Note that these items are manufactured by Dayton/Superior. Alternates shall be submitted to the Engineer for review and approval and must meet the capacities shown above.

4. Bearing pads, where specified, between precast concrete elements shall be plain, unreinforced neoprene with a minimum thickness of 1/2" and a minimum durometer hardness of 50.
5. All precast fascia panels and outlooks shall be sealed with Canyon Tone Clear sealer by United Coatings or an approved equal. See specification for more information.
6. Steel plates shall conform to AASHTO M270M Grade 50. All steel plates shall be hot dip galvanized in accordance with AASHTO M-111 and ASTM A-385. Plate washers shall be 5"x5"x 1/2" Thk. with 7/8" diameter holes centered on the plate.

7. Non-shrink grout shall be according to ASTM C-1107 and have a minimum compressive strength of 5,000 psi.
8. All threaded rods, nuts and connection bolts shall be Type 304 Stainless Steel.

**Fabrication:**

1. All reinforcement shall have a minimum of 1 1/2" of clear cover.
2. Formliners shall have a maximum relief of 1/8" and be from or equivalent to the following manufacturers and patterns:
  - a. Custom Rock pattern T315 (Heavy Sandblast)
  - b. Fitzgerald pattern 16991 (Medium Sandblast)
  - c. Greenstreak pattern 348 (Medium Sandblast)
3. Prepare all precast surfaces in accordance with sealer manufacturer's recommendations. At a minimum, all surfaces shall receive a brush-blast cleaning and water rinse.
4. The reinforcement as shown is for in-place structural adequacy only. The precaster shall be responsible for any other reinforcement required for shipping and handling as well as inserts required for lifting.



**PRECAST PIECE LOCATION PLAN**

COMPANY NAME: HRGreen  
 PROJECT: Precast  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:05:08 AM  
 FILE NAME: 8620412-E-PreCast.dgn  
 PLOT DRIVER: pdfLdt  
 PEN TABLE: Struct 22-34.tbl



|                       |                |           |
|-----------------------|----------------|-----------|
| USER NAME = whood     | DESIGNED - SSM | REVISED - |
|                       | CHECKED - RGD  | REVISED - |
| PLOT SCALE = N.T.S.   | DRAWN - WJH    | REVISED - |
| PLOT DATE = 7/26/2011 | CHECKED -      | REVISED - |

**CITY OF AURORA  
DOWNER PLACE OVER THE EAST BRANCH  
OF THE FOX RIVER**

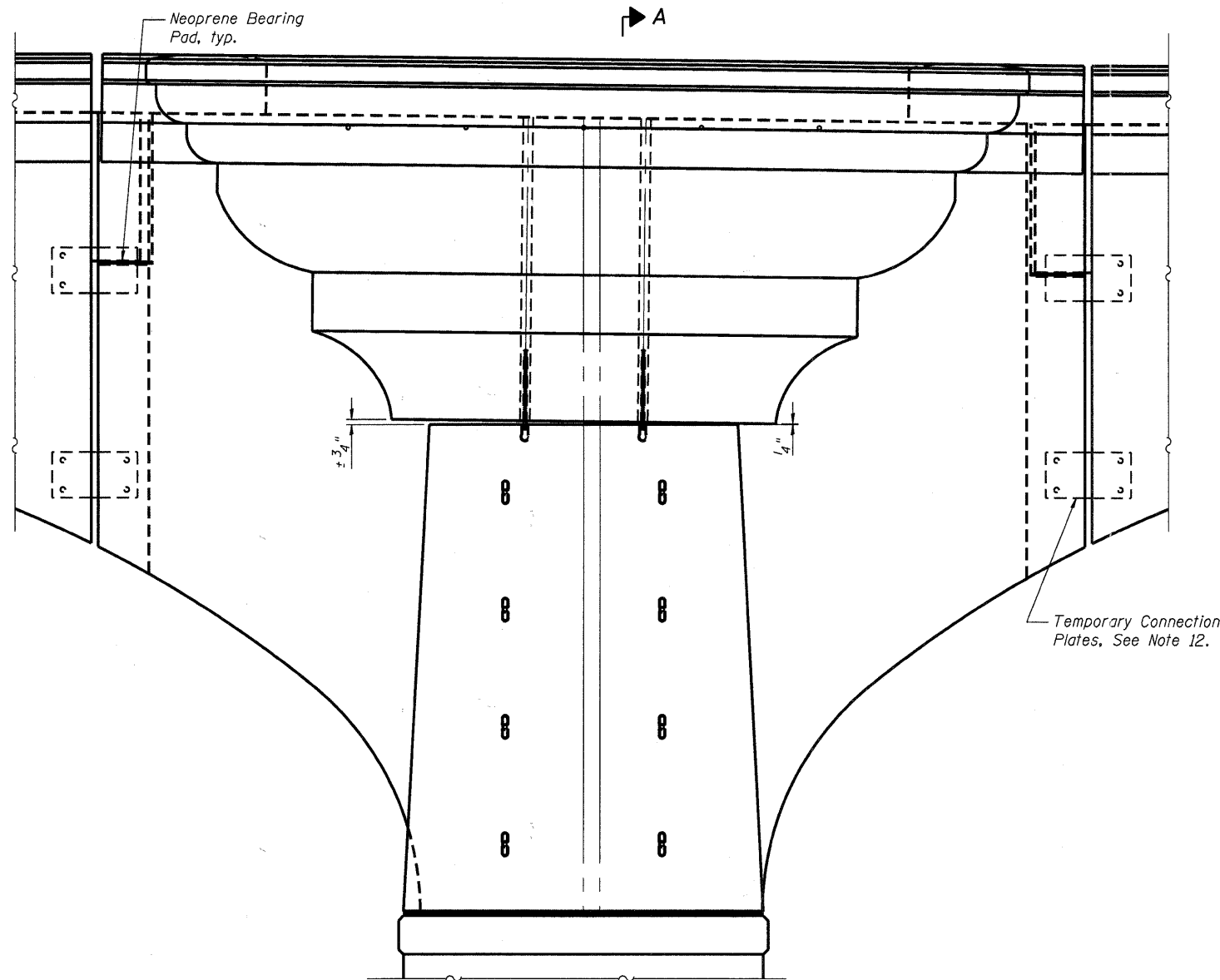
**PRECAST CONCRETE FASCIA PANEL - NOTES  
STRUCTURE NO. 045-6005**

SHEET NO. SE-19 OF SE-45 SHEETS

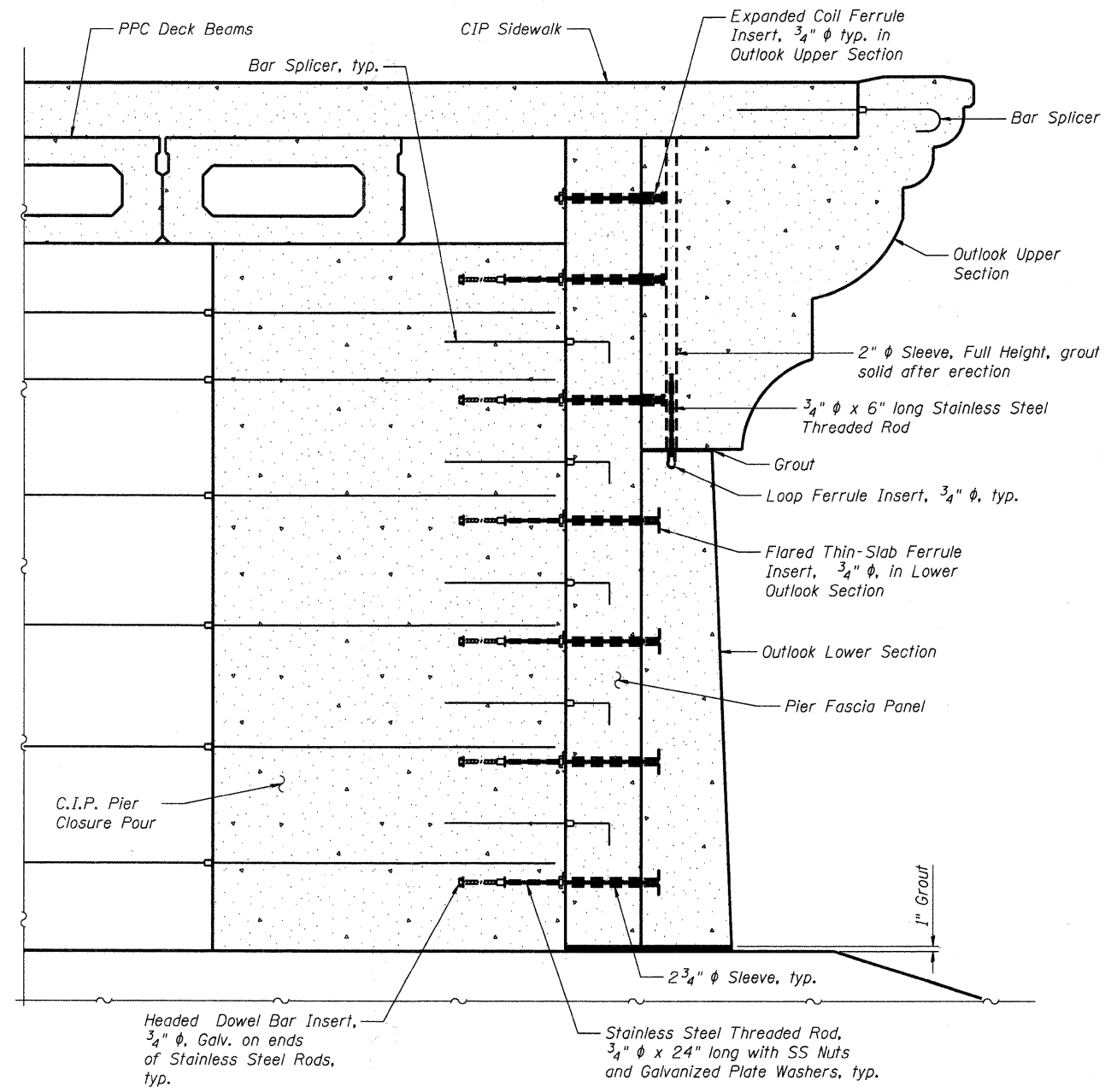
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|---------------------------|----------------|--------|--------------|-----------|
| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|                           | 07-00264-00-BR | KANE   | 164          | 119       |
| CONTRACT NO.              |                |        | 63620        |           |
| ILLINOIS FED. AID PROJECT |                |        |              |           |

# SUGGESTED PRECAST CONCRETE ERECTION SEQUENCE

1. The Contractor shall verify dimensions and coordinate with Fabricator.
2. After the center sections of the cast-in-place concrete piers and abutments have been cast and the center twelve deck beams have been set, erect and temporarily support the pier and abutment fascia panels (NWA, SWA, NEA, SEA, SP-1, SP-2, NP-1 and NP-2). These panels must be shimmed and set in a nominal 1" thick grout bed.
3. Erect the lower sections of the outlooks by shimming and setting them into a 1J nominal grout bed and installing stainless steel threaded rods through the fascia panels into the ferrule inserts in the interior faces of the lower outlook sections. Complete the connections with plate washers and nuts. Note: This step may be omitted if the lower outlook section is monolithic with the pier fascia panels.
4. Install stainless steel threaded rods into ferrule inserts in the tops of the lower outlook sections.
5. Erect the upper section of the outlooks by placing them over the rods in the top of the lower outlook section. Shim the east side of the upper outlook section with a 1/4J nominal shim. Using the 1/4J shim height as a starting point, rotate the upper outlook section to match the profile of the roadway (approximately 3/4J at the west edge of the lower outlook section). Grout the threaded rods in the sleeves from the top of the upper outlook section and grout the space between the upper and lower outlook sections.
6. Install stainless steel threaded rods through the fascia panels and into the upper outlook sections. Complete the connections with plate washers and nuts.
7. Install headed dowel bar inserts onto the ends of the threaded rods that pass through the fascia panels and into the pier closure pour concrete.
8. Install CIP concrete section of bar splicers onto the interior face of the fascia panels and the construction joint faces of the piers.
8. Install CIP concrete section of bar splicers onto the interior face of the fascia panels and the construction joint faces of the piers.
9. Install balance of pier reinforcement and pier formwork.
10. Cast closure pour concrete for piers.
11. Erect exterior deck beams.
12. Construct concrete wearing surface.
13. Erect center fascia panels (N-1 thru N-3 and S-1 thru S-3) onto bearing pads and pockets of supporting fascia panels. Install temporary connection plates between center fascia panels and supporting fascia panels using bolts threaded into wingwall inserts. These connections must be completed before removing fascia panel from crane hook.
14. Install formwork between fascia panels and exterior deck beams.
15. Install CIP concrete section of sidewalk bar splicers into spanning fascia panels and outlook upper sections.
16. Construct sidewalk on bridge.
17. See sheet SW-2 for the remainder of suggested construction sequence items.



ELEVATION



SECTION A-A

HRGreen  
 PROJECT CONTACT: Mark C. Herdiny  
 CITY: Aurora  
 DATE PLOTTED: 7/26/2011 11:05:12 AM  
 FILE NAME: 86090412-e-Pr-001103.dgn  
 PLOT DRIVER: pdfplot  
 PEN TABLE: Struct\_22x34.tbl

**HRGreen.com**  
 Illinois Professional Design Firm  
 #184-001322

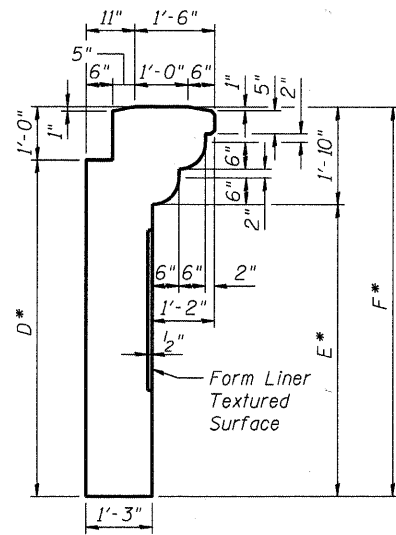
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| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

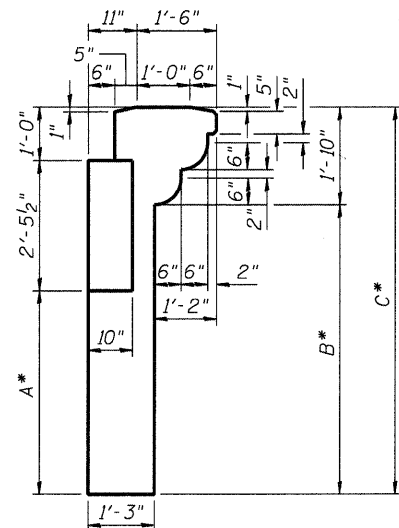
**PRECAST CONCRETE FASCIA PANEL - ASSEMBLY**  
**STRUCTURE NO. 045-6005**

SHEET NO. SE-20 OF SE-45 SHEETS

| F.A. RTE.                   | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------------|----------------|--------|--------------|-----------|
|                             | 07-00264-00-BR | KANE   | 164          | 120       |
| CONTRACT NO. 63620          |                |        |              |           |
| [ILLINOIS] FED. AID PROJECT |                |        |              |           |

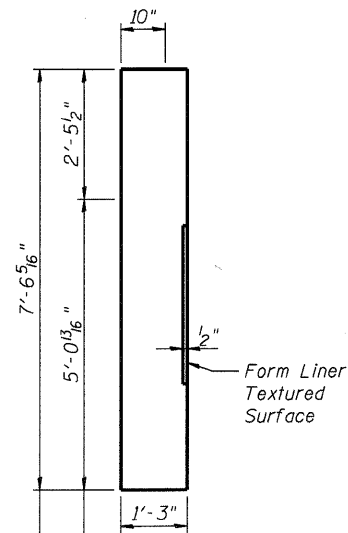


SECTION A-A



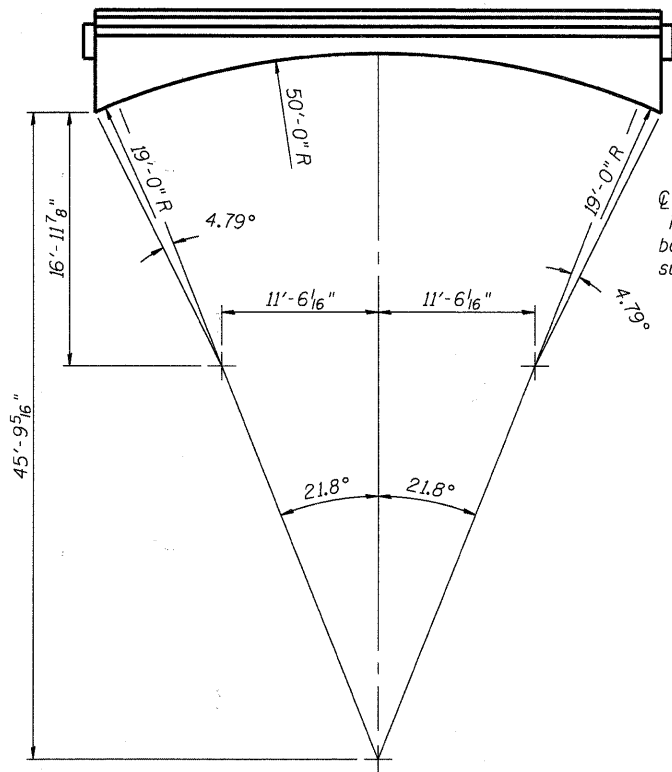
SECTION B-B

\*See section dimensions Table on Sht. SE-23.



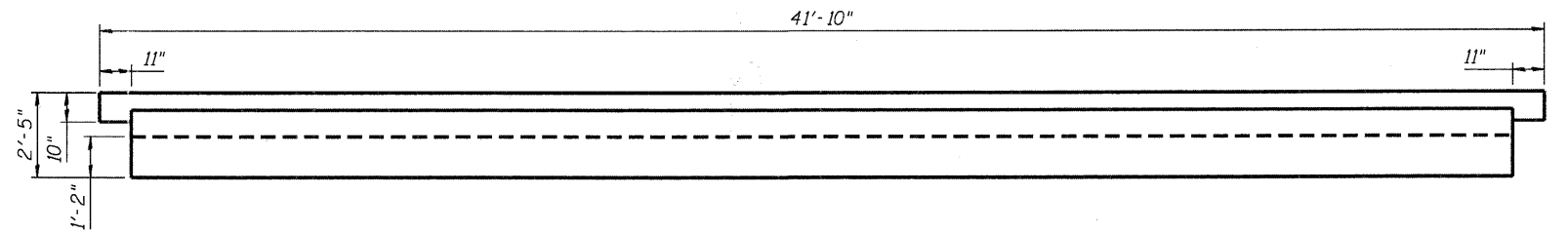
SECTION C-C

At Right End

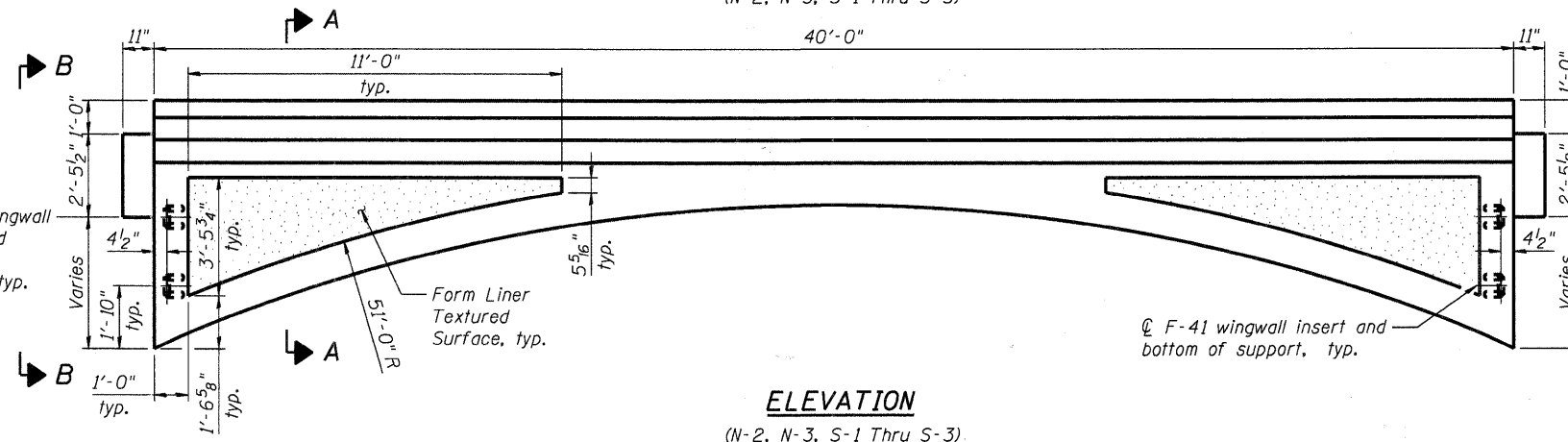


ARCH LAYOUT

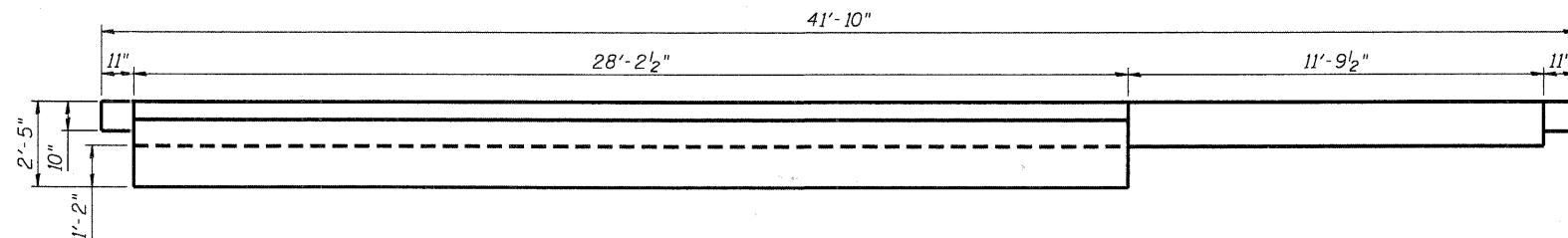
Note:  
The Fascia Arch Geometry is only slightly different between the East and West Bridges. Therefore, the Precaster may use the same arch layout for both bridges. The geometry of the Fascia Panels outside of the Center Span is different and requires following the respective layouts.



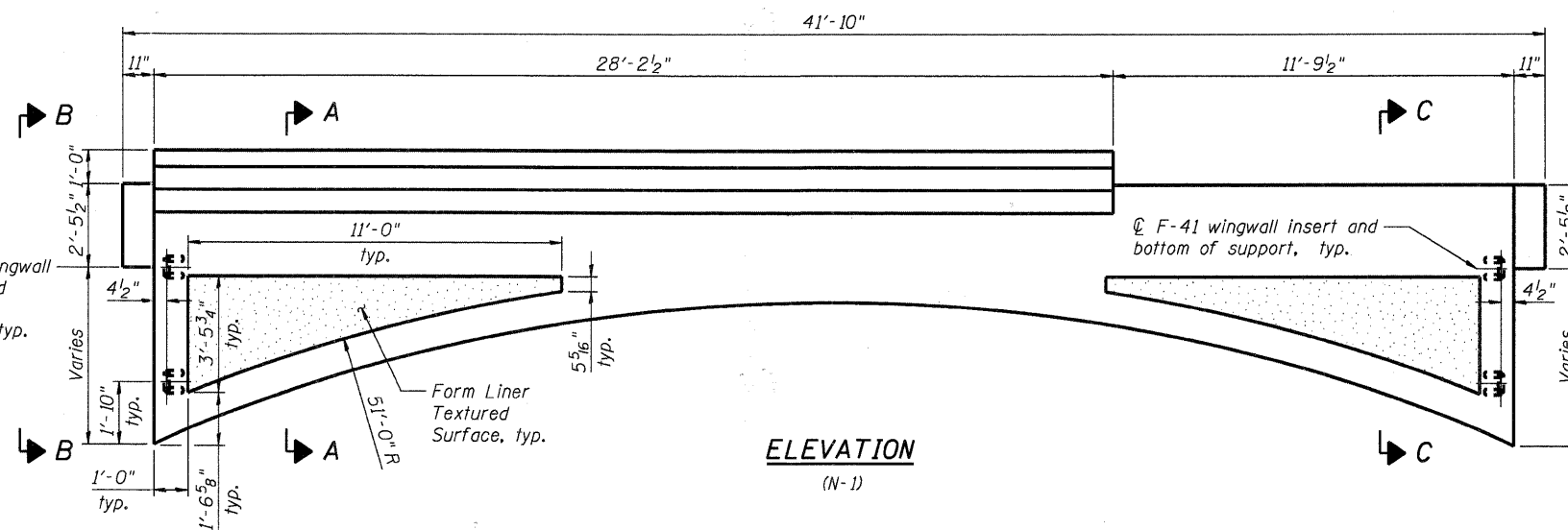
PLAN  
(N-2, N-3, S-1 Thru S-3)



ELEVATION  
(N-2, N-3, S-1 Thru S-3)



PLAN  
(N-1)



ELEVATION  
(N-1)

HRGreen  
Michael G. Harding  
City of Aurora  
7/26/2011 11:05:19 AM  
66090472-E-Pre02.dgn  
pof:ph  
Struct 22x34.tbl



|                       |                |          |
|-----------------------|----------------|----------|
| USER NAME = w hood    | DESIGNED - SSM | REVISD - |
| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISD - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISD - |
|                       | CHECKED -      | REVISD - |

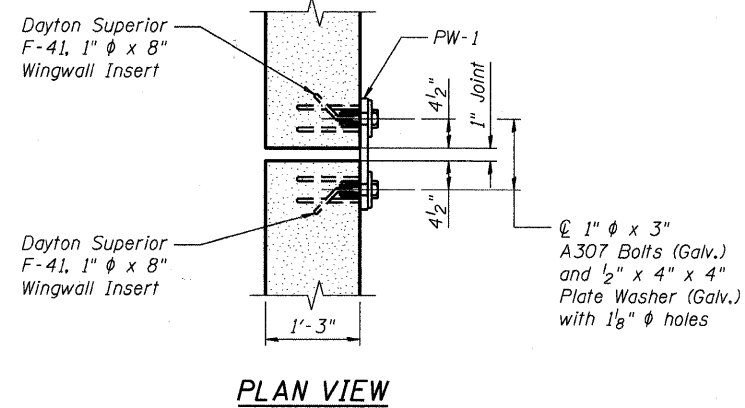
CITY OF AURORA  
DOWNER PLACE OVER THE EAST BRANCH  
OF THE FOX RIVER

PRECAST CONCRETE FASCIA PANEL - SPANDREL  
STRUCTURE NO. 045-6005

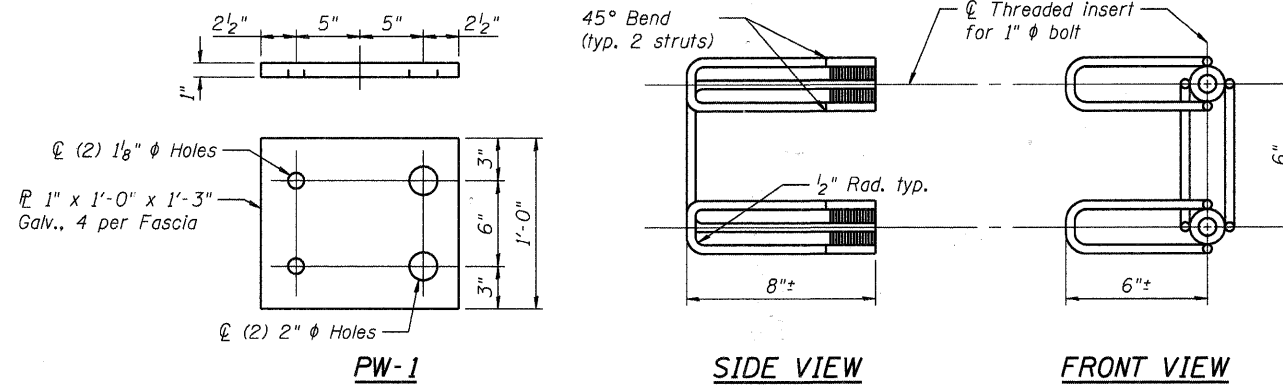
SHEET NO. SE-21 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO.          |
|---------------------------|----------------|--------|--------------|--------------------|
|                           | 07-00264-00-BR | KANE   | 164          | 121                |
|                           |                |        |              | CONTRACT NO. 63620 |
| ILLINOIS FED. AID PROJECT |                |        |              |                    |





PLAN VIEW



DAYTON SUPERIOR F-41, 1"  $\phi$  x 8" WINGWALL INSERT

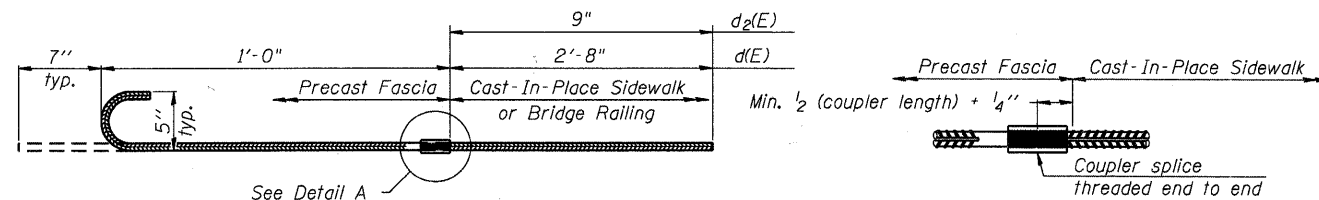
SECTION DIMENSION TABLE

|     | Left Side |            |            | Center Span |            |            | Right Side |            |           |
|-----|-----------|------------|------------|-------------|------------|------------|------------|------------|-----------|
|     | A         | B          | C          | D           | E          | F          | A          | B          | C         |
| S-1 | 4'-3 1/8" | 5'-10 5/8" | 7'-8 5/8"  | 2'-8 5/8"   | 1'-10 5/8" | 3'-8 5/8"  | 4'-10 1/2" | 6'-6"      | 8'-4"     |
| S-2 | 5'-1"     | 6'-8 1/2"  | 8'-6 1/2"  | 3'-4 1/2"   | 2'-6 5/8"  | 4'-4 1/2"  | 5'-3 1/4"  | 6'-10 3/4" | 8'-8 3/4" |
| S-3 | 5'-2 5/8" | 6'-10 1/8" | 8'-8 1/8"  | 3'-2 5/8"   | 2'-4 5/8"  | 4'-2 5/8"  | 4'-9 5/8"  | 6'-5 1/8"  | 8'-3 1/8" |
| N-1 | 5'-1 3/8" | 6'-8 7/8"  | 8'-6 7/8"  | 3'-0 3/8"   | 2'-2 3/8"  | 4'-0 3/8"  | N/A        | N/A        | N/A       |
| N-2 | 5'-2 1/2" | 6'-10"     | 8'-8"      | 3'-5"       | 2'-7 1/8"  | 4'-5"      | 5'-2 3/4"  | 6'-10 1/4" | 8'-8 1/4" |
| N-3 | 4'-6 1/8" | 6'-1 5/8"  | 7'-11 5/8" | 2'-11 1/2"  | 2'-1 1/2"  | 3'-11 1/2" | 5'-0 3/4"  | 6'-8 1/4"  | 8'-6 1/4" |

U BAR DIMENSION TABLE

| G | u(E)  | u <sub>1</sub> (E) | u <sub>2</sub> (E) | u <sub>3</sub> (E) | u <sub>4</sub> (E) | u <sub>5</sub> (E) | u <sub>6</sub> (E) | u <sub>7</sub> (E) | u <sub>8</sub> (E) | u <sub>9</sub> (E) | u <sub>10</sub> (E) | u <sub>11</sub> (E) |
|---|-------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|
|   | 2'-5" | 2'-8"              | 2'-9"              | 2'-11"             | 3'-0"              | 3'-2"              | 3'-7"              | 3'-9"              | 4'-0"              | 4'-6"              | 4'-7"               | 4'-11"              |

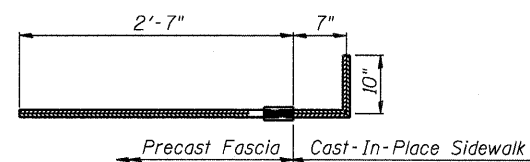
| H | u <sub>12</sub> (E) | u <sub>13</sub> (E) | u <sub>14</sub> (E) | u <sub>15</sub> (E) | u <sub>16</sub> (E) | u <sub>17</sub> (E) | u <sub>18</sub> (E) | u <sub>19</sub> (E) | u <sub>20</sub> (E) | u <sub>21</sub> (E) | u <sub>22</sub> (E) | u <sub>23</sub> (E) |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   | 6'-0"               | 6'-8"               | 6'-10"              | 7'-1"               | 7'-0"               | 6'-7"               | 6'-11"              | 6'-4"               | 7'-0"               | 7'-0"               | 6'-4"               | 6'-10"              |



#5 d(E) AND d<sub>2</sub>(E) BAR SPLICER ASSEMBLY FOR PRECAST FASCIA

DETAIL A

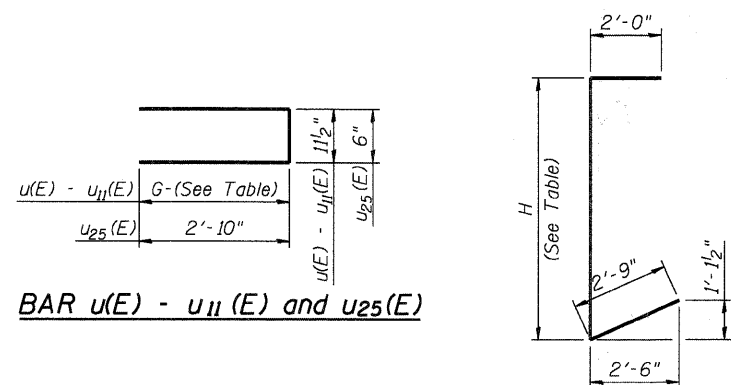
No. d(E) required = 229  
No. d<sub>2</sub>(E) required = 458



#5 d<sub>1</sub>(E) BAR SPLICER ASSEMBLY FOR PRECAST FASCIA

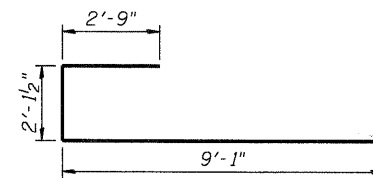
No. required = 12

Note:  
1. Precast concrete supplier is responsible for supplying complete bar splicer assemblies.

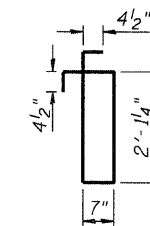


BAR u(E) - u<sub>11</sub>(E) and u<sub>25</sub>(E)

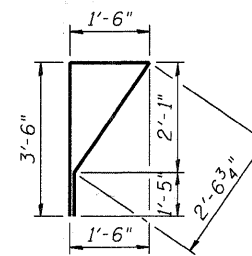
BAR u<sub>12</sub>(E) - u<sub>23</sub>(E)



BAR u<sub>24</sub>(E)



BAR s(E)



BAR s<sub>1</sub>(E)

SPANDREL PANEL REINFORCEMENT

| Bar                 | No. | Size | Length      | Shape |
|---------------------|-----|------|-------------|-------|
| s(E)                | 24  | #4   | 6'-1 1/2"   |       |
| s <sub>1</sub> (E)  | 220 | #4   | 9'-0"       |       |
| p(E)                | 24  | #7   | 20'-5"      |       |
| p <sub>1</sub> (E)  | 24  | #7   | 19'-9"      |       |
| h(E)                | 92  | #5   | 39'-6"      |       |
| h <sub>1</sub> (E)  | 4   | #5   | 27'-9"      |       |
| u(E)                | 12  | #4   | 5'-10"      |       |
| u <sub>1</sub> (E)  | 16  | #4   | 6'-4"       |       |
| u <sub>2</sub> (E)  | 24  | #4   | 6'-6"       |       |
| u <sub>3</sub> (E)  | 20  | #4   | 6'-10"      |       |
| u <sub>4</sub> (E)  | 26  | #4   | 7'-0"       |       |
| u <sub>5</sub> (E)  | 46  | #4   | 7'-4"       |       |
| u <sub>6</sub> (E)  | 36  | #4   | 8'-2"       |       |
| u <sub>7</sub> (E)  | 24  | #4   | 8'-6"       |       |
| u <sub>8</sub> (E)  | 30  | #4   | 9'-0"       |       |
| u <sub>9</sub> (E)  | 18  | #4   | 10'-0"      |       |
| u <sub>10</sub> (E) | 8   | #4   | 10'-2"      |       |
| u <sub>11</sub> (E) | 88  | #4   | 10'-10"     |       |
| u <sub>12</sub> (E) | 4   | #5   | 10'-9"      |       |
| u <sub>13</sub> (E) | 4   | #5   | 11'-5"      |       |
| u <sub>14</sub> (E) | 4   | #5   | 11'-7"      |       |
| u <sub>15</sub> (E) | 4   | #5   | 11'-10"     |       |
| u <sub>16</sub> (E) | 4   | #5   | 11'-9"      |       |
| u <sub>17</sub> (E) | 4   | #5   | 11'-4"      |       |
| u <sub>18</sub> (E) | 4   | #5   | 11'-8"      |       |
| u <sub>19</sub> (E) | 4   | #5   | 11'-1"      |       |
| u <sub>20</sub> (E) | 4   | #5   | 11'-9"      |       |
| u <sub>21</sub> (E) | 4   | #5   | 11'-9"      |       |
| u <sub>22</sub> (E) | 4   | #5   | 11'-1"      |       |
| u <sub>23</sub> (E) | 4   | #5   | 11'-7"      |       |
| u <sub>24</sub> (E) | 24  | #6   | 13'-11 1/2" |       |
| u <sub>25</sub> (E) | 24  | #4   | 6'-2"       |       |

Approximate quantities for six (6) Spandrel Panels

COMPANY NAME: HRGreen  
PROJECT CONTACT: Michael G. Harding  
CITY: Aurora  
DATE PLOTTED: 7/26/2011 11:05:28 AM  
FILE NAME: 8609012-E-Pr-04.dgn  
PLOT DRIVER: pdfplot  
PEN TABLE: Struct 22-34.tbl



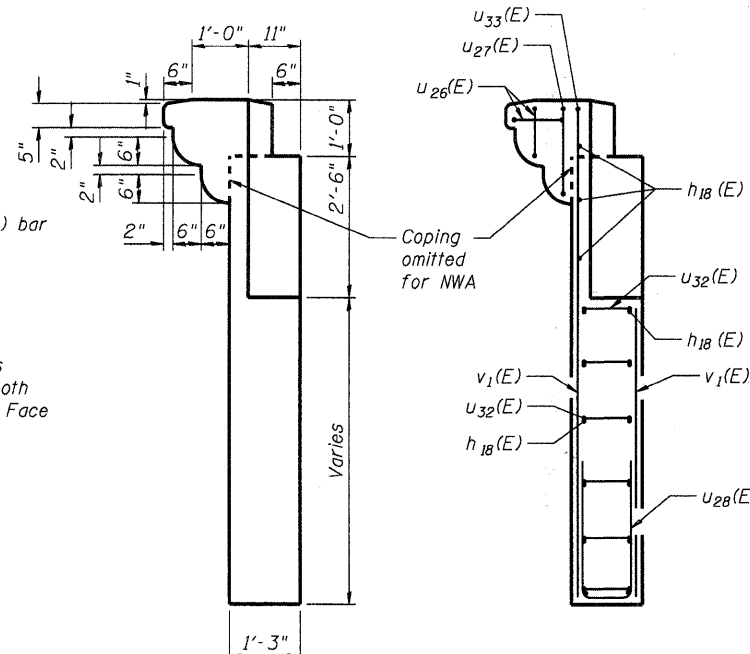
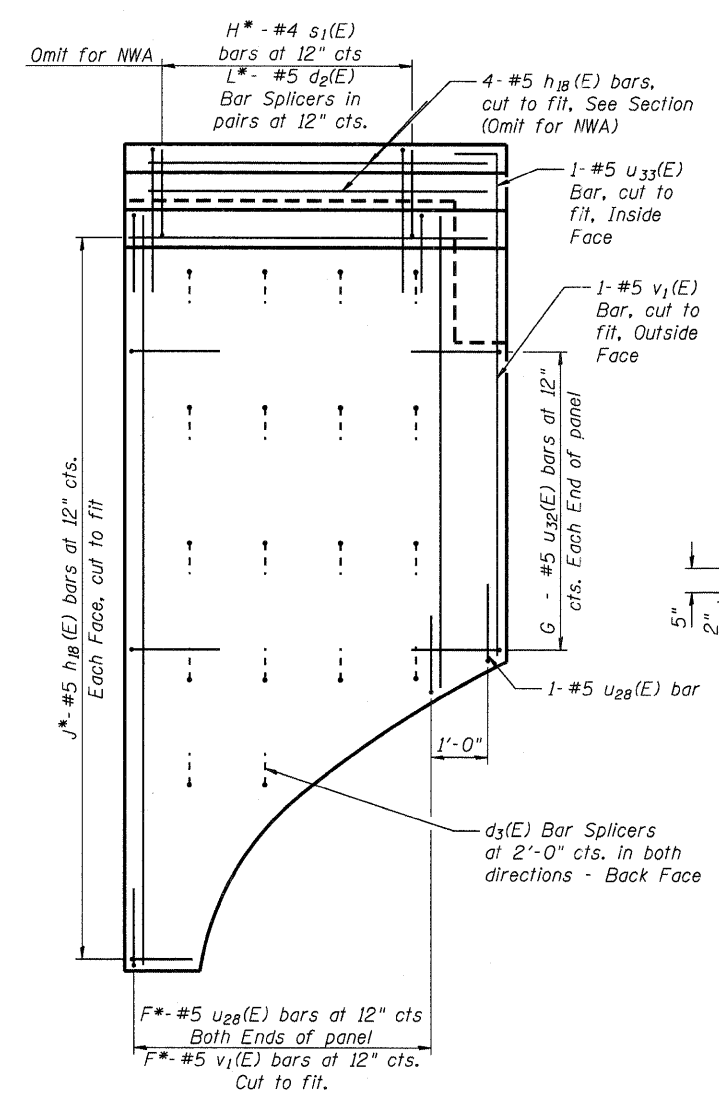
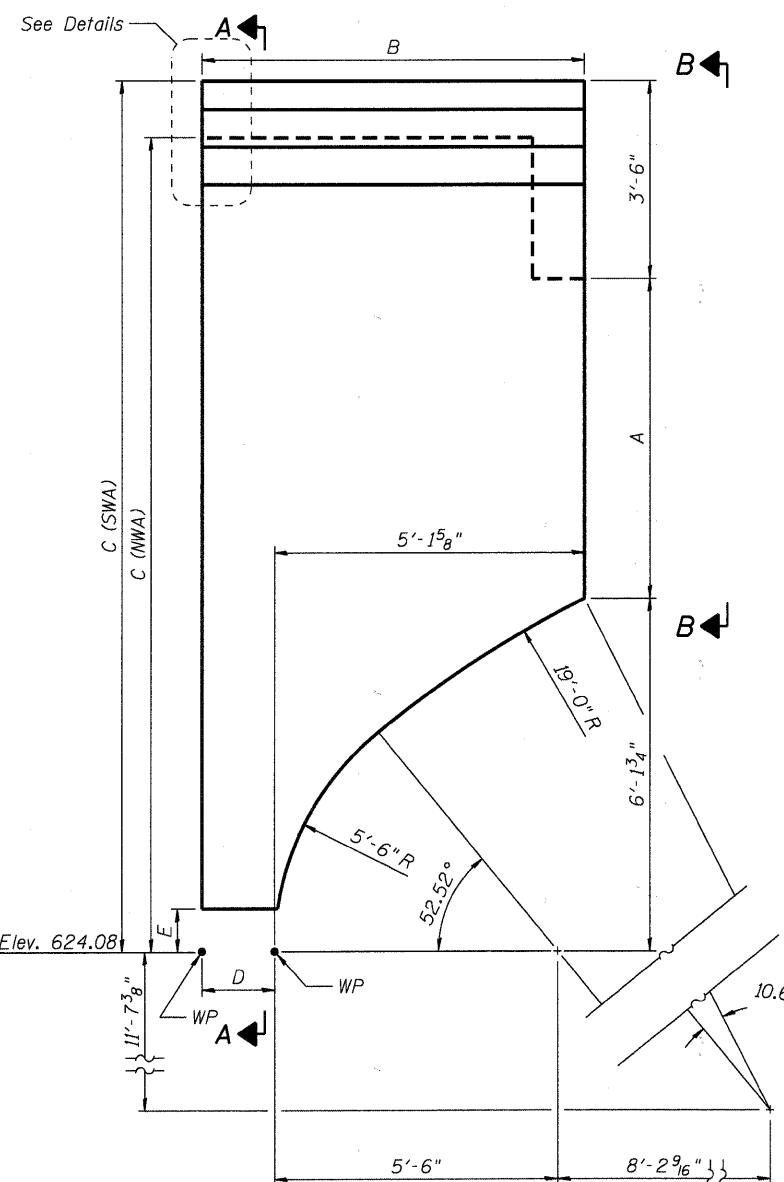
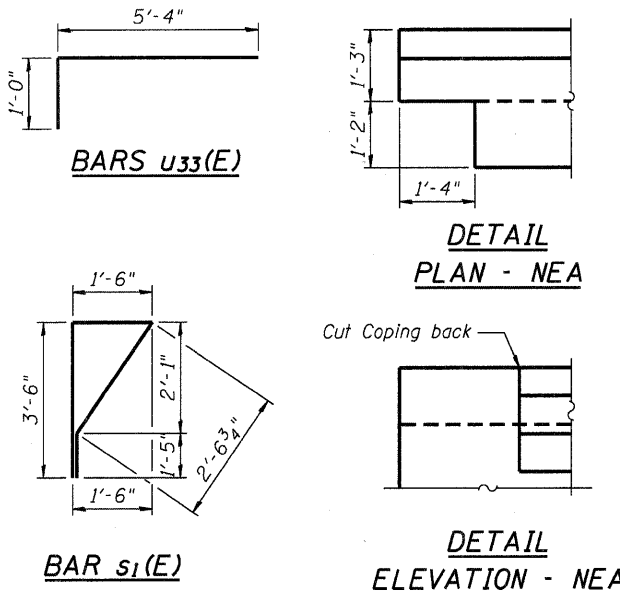
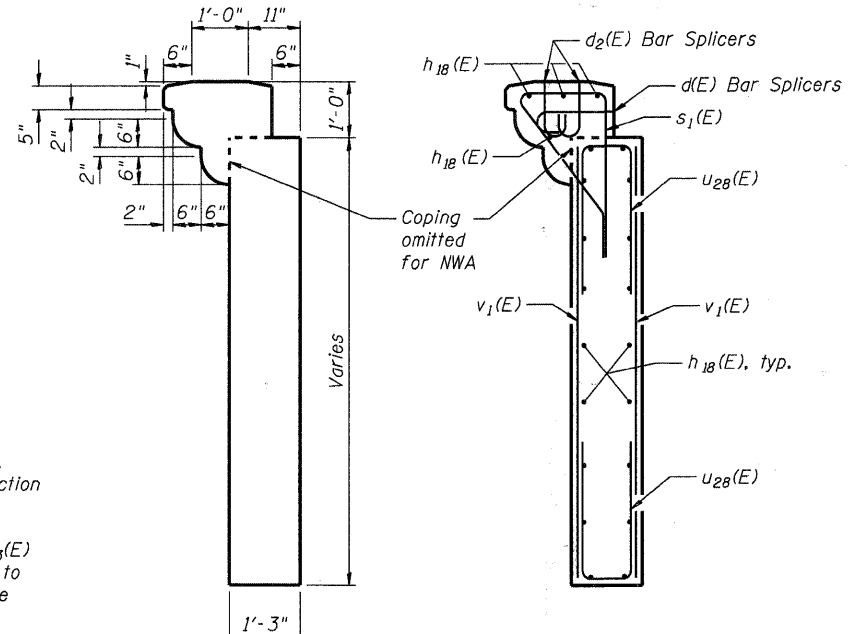
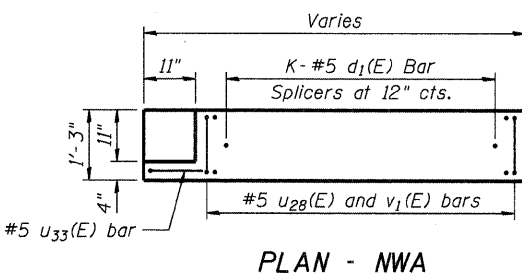
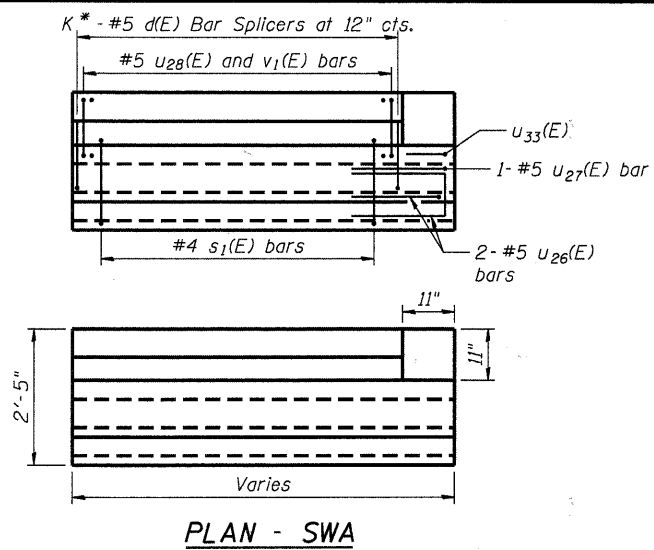
|                       |                |           |
|-----------------------|----------------|-----------|
| USER NAME = whood     | DESIGNED - SSM | REVISED - |
| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

CITY OF AURORA  
DOWNER PLACE OVER THE EAST BRANCH  
OF THE FOX RIVER

PRECAST CONCRETE FASCIA PANEL - SPANDREL  
STRUCTURE NO. 045-6005

SHEET NO. SE-23 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---------------------------|----------------|--------|--------------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164                | 123       |
|                           |                |        | CONTRACT NO. 63620 |           |
| ILLINOIS FED. AID PROJECT |                |        |                    |           |



| Bar    | Length |
|--------|--------|
| u26(E) | 4'-3"  |
| u27(E) | 4'-3"  |
| u28(E) | 3'-9"  |
| u32(E) | 3'-9"  |

BARS u26(E), u27(E), u28(E) AND u32(E)

ABUTMENT PANEL REINFORCEMENT

| Bar    | No. | Size | Length    | Shape |
|--------|-----|------|-----------|-------|
| s1(E)  | 5   | #4   | 9'-0"     |       |
| h18(E) | 54  | #5   | 6'-8"     |       |
| u26(E) | 2   | #4   | 9'-4"     |       |
| u27(E) | 1   | #4   | 10'-0"    |       |
| u28(E) | 26  | #5   | 8'-6"     |       |
| u32(E) | 18  | #5   | 8'-4 3/4" |       |
| u33(E) | 2   | #5   | 6'-4"     |       |
| v1(E)  | 28  | #5   | 13'-4"    |       |

Approximate quantities for two (2) abutment panels.

|     | A           | B          | C           | D       | E  | F | G | H | J  | K | L  |
|-----|-------------|------------|-------------|---------|----|---|---|---|----|---|----|
| SWA | 3'- 10 1/8" | 6'- 2 5/8" | 13'- 4 1/2" | 1'- 1"  | 1" | 6 | 5 | 5 | 14 | 5 | 10 |
| NWA | 3'- 3"      | 7'- 0 5/8" | 12'- 9"     | 1'- 11" | 1" | 7 | 4 | 0 | 13 | 7 | 0  |

COMPANY NAME: HRGreen  
 PROJECT CONTACT: HRGreen, Inc.  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 10:56:30 AM  
 FILE NAME: 06090472-E-Prof06.dgn  
 PLOT DRIVER: pdf.plt  
 PEN TABLE: Struct 22x24.tbl



HRGreen.com  
 Illinois Professional Design Firm  
 #194-001322

|                        |                |          |
|------------------------|----------------|----------|
| USER NAME = whoad      | DESIGNED - SSM | REVISD - |
| PLLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISD - |
| PLLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISD - |
|                        | CHECKED -      | REVISD - |

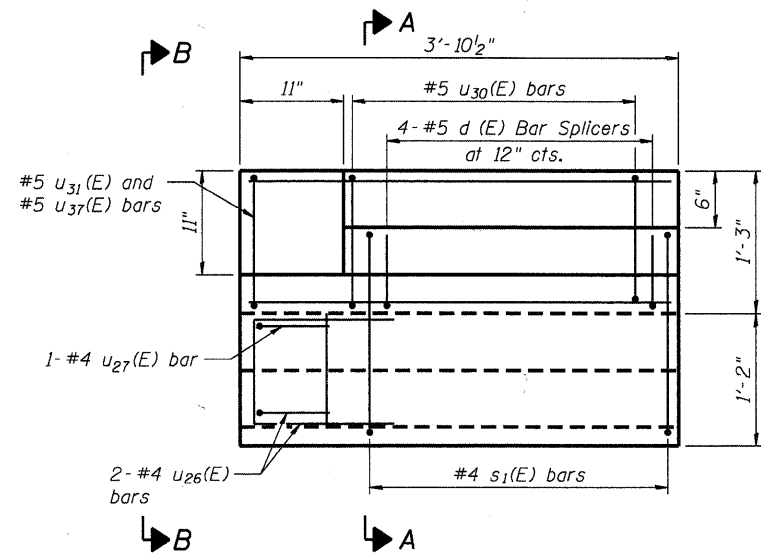
CITY OF AURORA  
 DOWNER PLACE OVER THE EAST BRANCH  
 OF THE FOX RIVER

PRECAST CONCRETE FASCIA PANEL - ABUTMENT  
 STRUCTURE NO. 045-6005

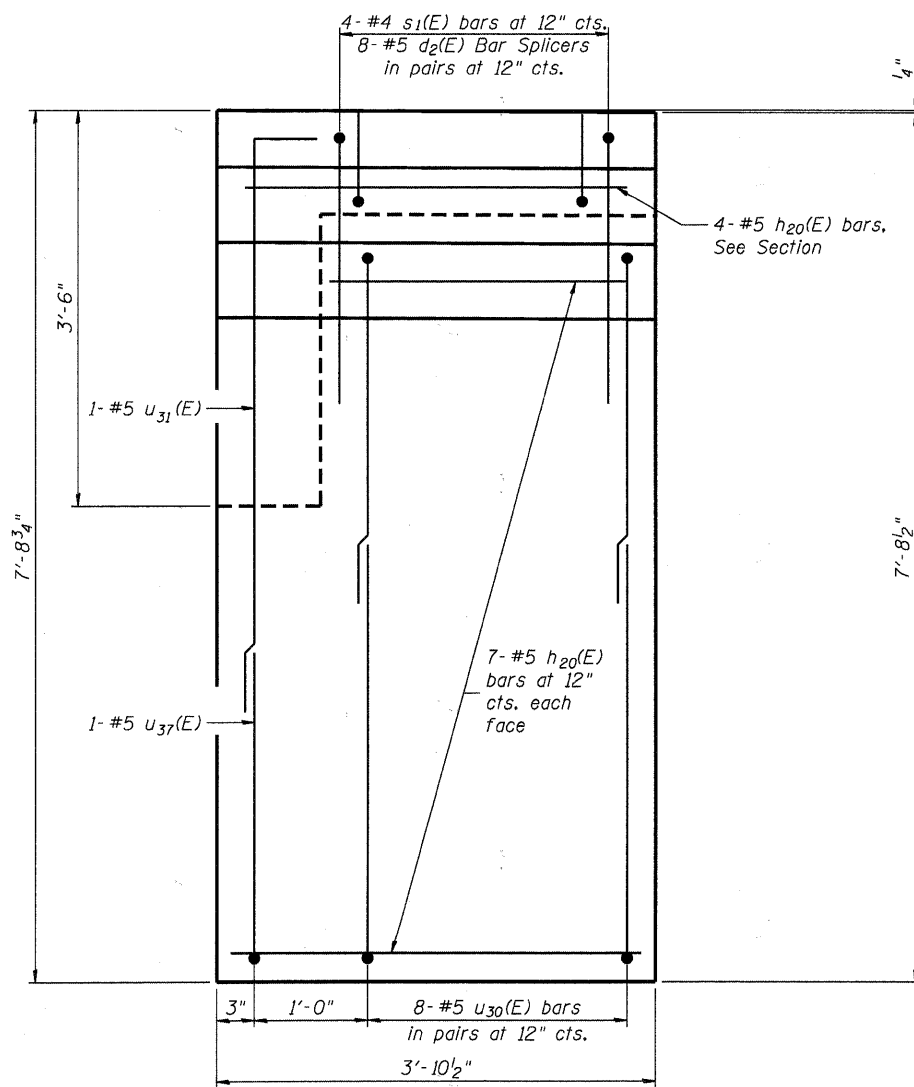
|                    |                |        |                           |           |
|--------------------|----------------|--------|---------------------------|-----------|
| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|                    | 07-00264-00-BR | KANE   | 164                       | 124       |
| CONTRACT NO. 63620 |                |        | ILLINOIS FED. AID PROJECT |           |

SHEET NO. SE-24 OF SE-45 SHEETS

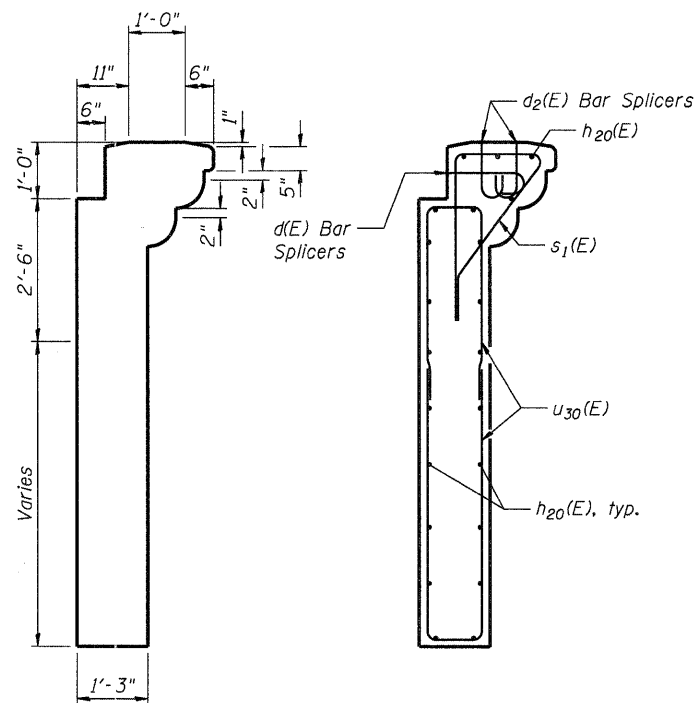




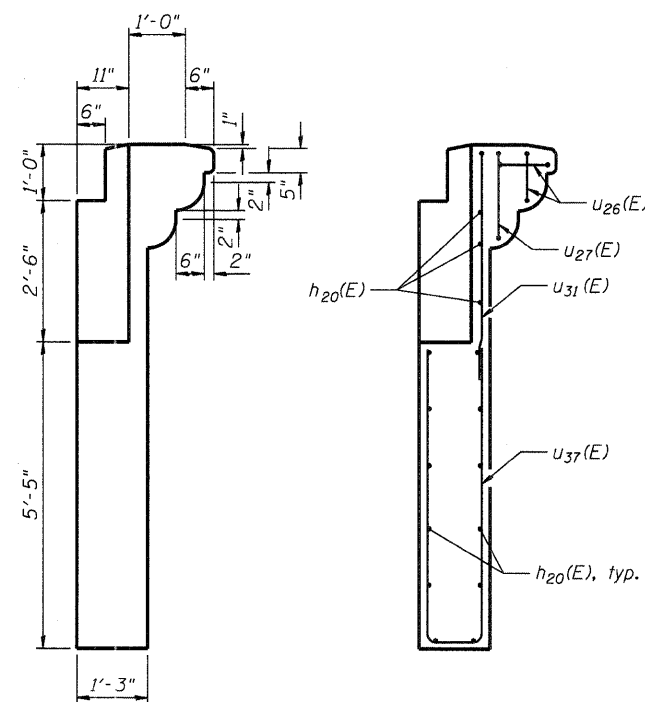
PLAN - SEA



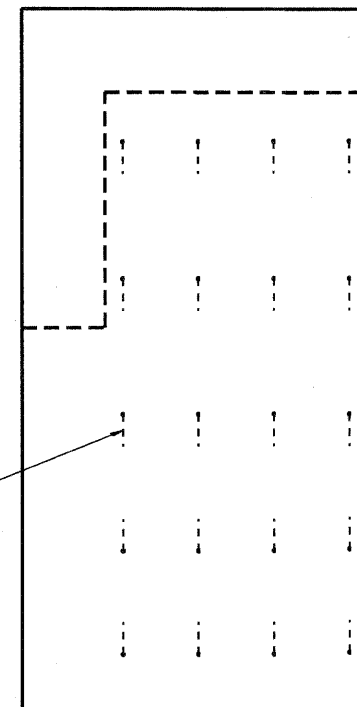
ELEVATION - SEA



SECTION A-A

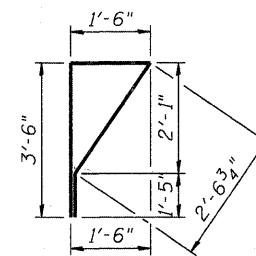


SECTION B-B

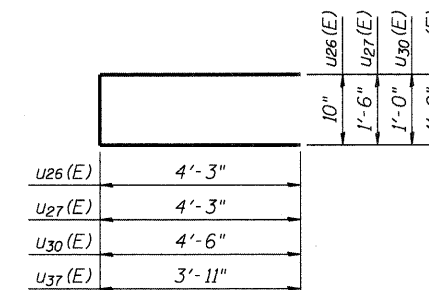


BAR SPLICER LAYOUT

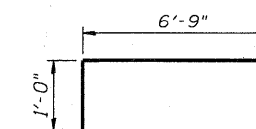
20 Required



BAR s1(E)



BARS u26(E), u27(E), u30(E) AND u37(E)



BARS u31(E)

ABUTMENT PANEL REINFORCEMENT

| Bar    | No. | Size | Length | Shape |
|--------|-----|------|--------|-------|
| s1(E)  | 4   | #4   | 9'-0"  |       |
| h20(E) | 14  | #5   | 3'-6"  |       |
| u26(E) | 2   | #4   | 9'-4"  |       |
| u27(E) | 1   | #4   | 10'-0" |       |
| u30(E) | 8   | #5   | 10'-0" |       |
| u31(E) | 1   | #5   | 7'-9"  |       |
| u37(E) | 1   | #5   | 8'-10" |       |

Approximate quantities for one (1) abutment panel.

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 CLIENT: City of Aurora  
 FILE NAME: 86090472-E-17-07-07.dgn  
 PLOT DRIVER: pldrvr12  
 PEN TABLE: Struct 20x34.tbl



USER NAME = whood  
 PLOT SCALE = N.T.S.  
 PLOT DATE = 7/26/2011

DESIGNED - SSM  
 CHECKED - RGD  
 DRAWN - WJH  
 CHECKED -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

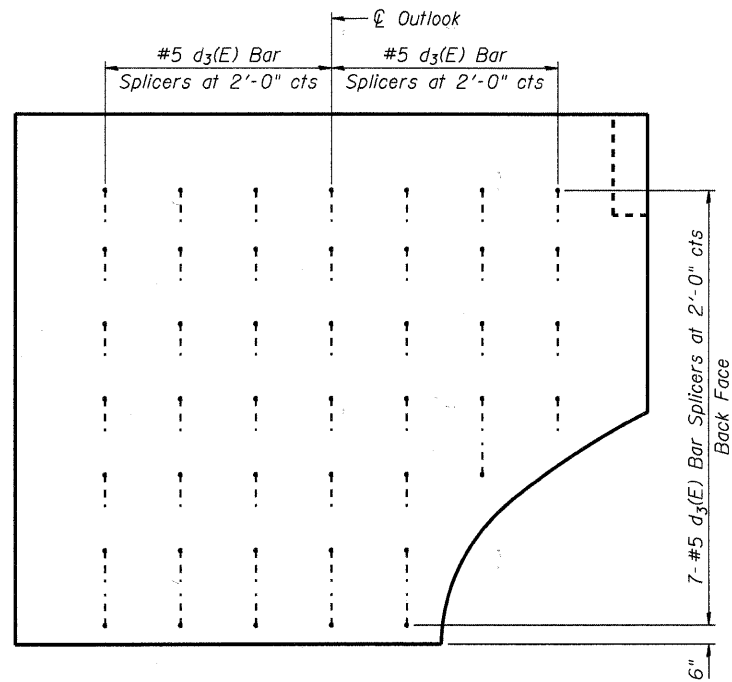
CITY OF AURORA  
 DOWNER PLACE OVER THE EAST BRANCH  
 OF THE FOX RIVER

PRECAST CONCRETE FASCIA PANEL - ABUTMENT  
 STRUCTURE NO. 045-6005

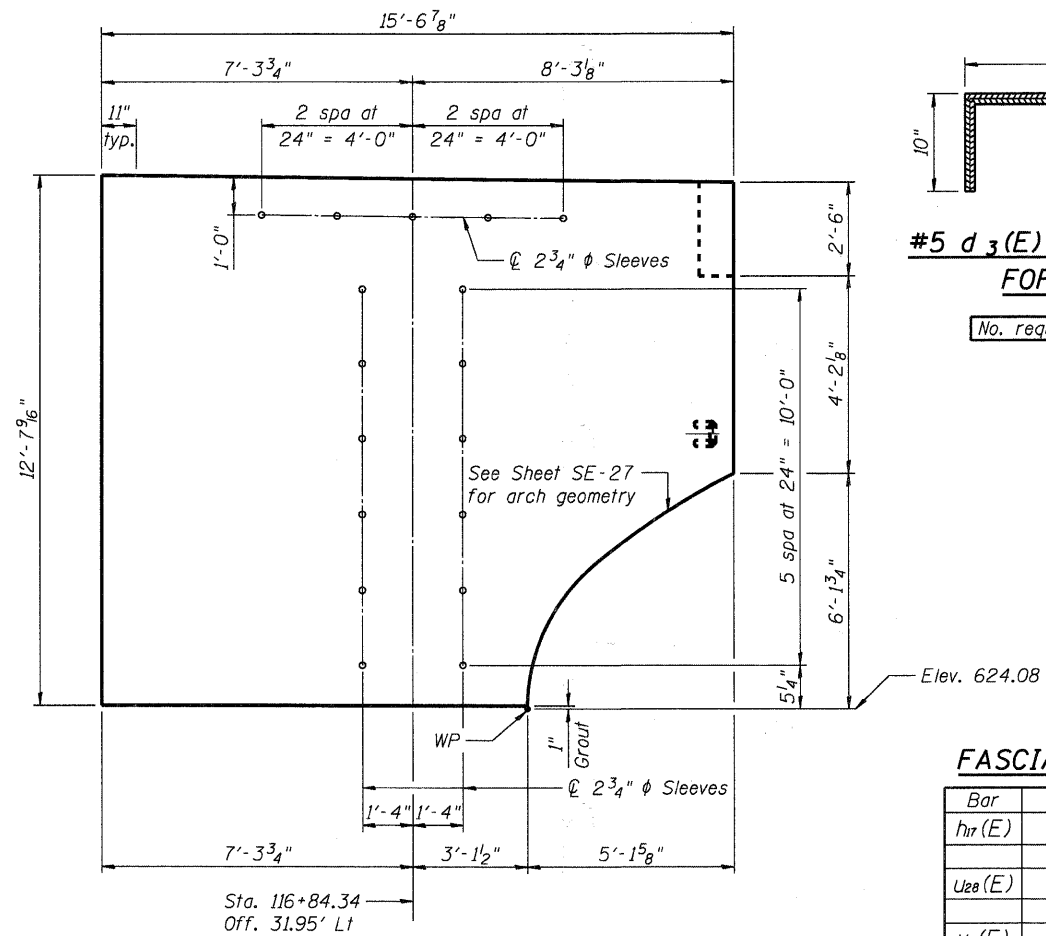
SHEET NO. SE-25 OF SE-45 SHEETS

| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|----------------|--------|--------------|-----------|
|                    | 07-00264-00-BR | KANE   | 164          | 125       |
| CONTRACT NO. 63620 |                |        |              |           |

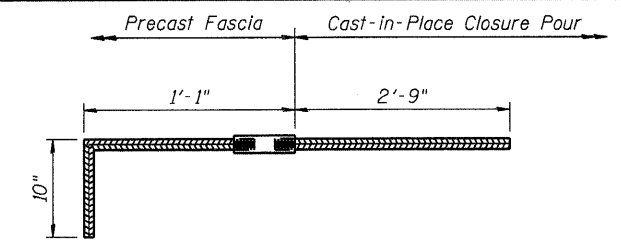
ILLINOIS FED. AID PROJECT



**BAR SPLICER LAYOUT**  
(46 Per Panel)

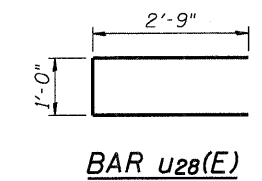


**PANEL ELEVATION - NEA**



**#5 d<sub>3</sub>(E) BAR SPLICER ASSEMBLY FOR PRECAST FASCIA**

No. required = 100 - Abutment Panels

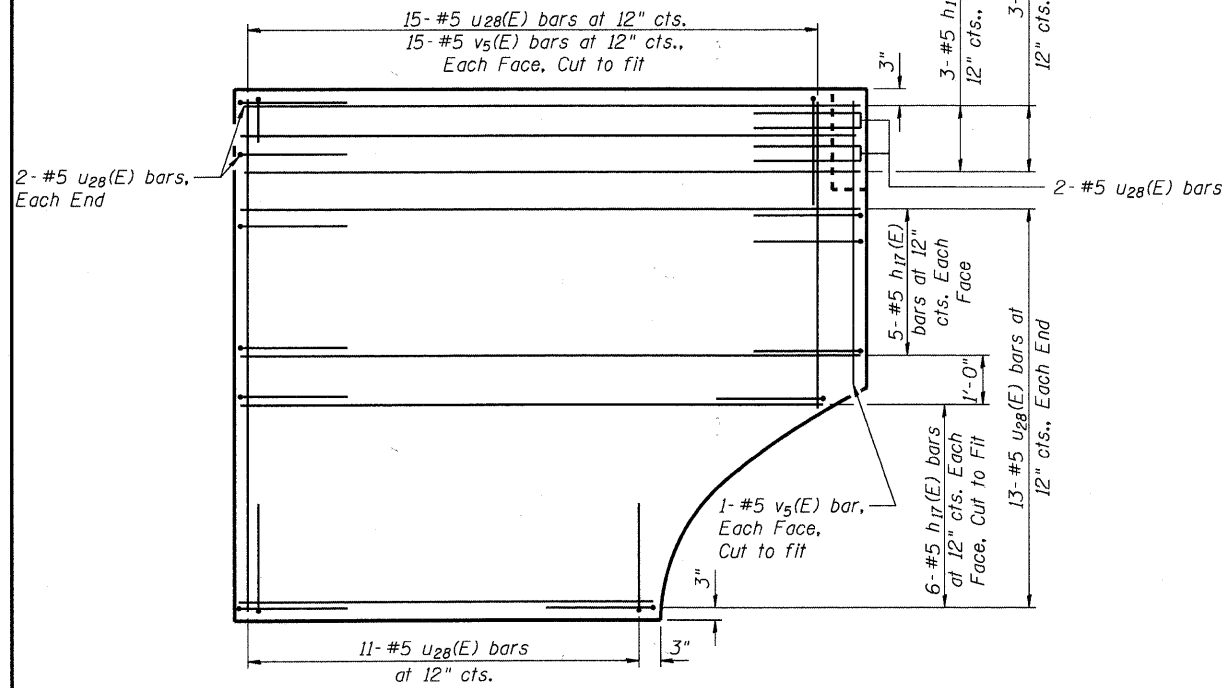


**BAR u<sub>28</sub>(E)**

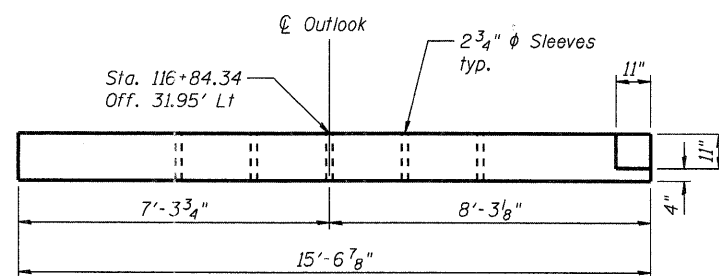
**FASCIA PANEL REINFORCEMENT**

| Bar                 | No. | Size | Length | Shape |
|---------------------|-----|------|--------|-------|
| hr(E)               | 28  | #5   | 15'-2" | —     |
| u <sub>28</sub> (E) | 41  | #5   | 6'-6"  | U     |
| v <sub>5</sub> (E)  | 32  | #5   | 12'-3" | —     |

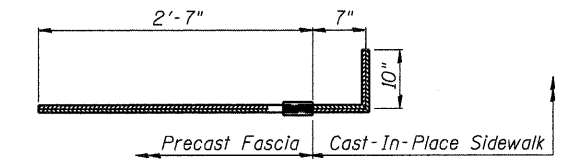
Approximate quantities for one (1) Fascia Panel



**PANEL ELEVATION - REBAR**

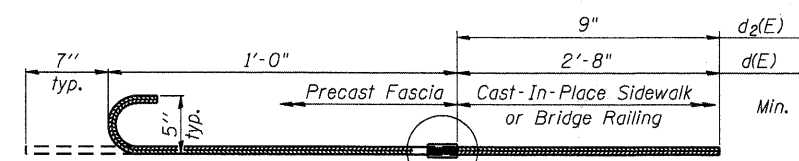


**PANEL PLAN - NEA**



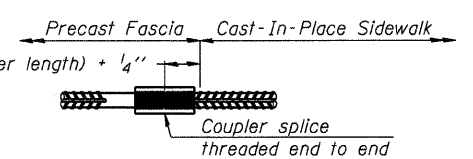
**#5 d<sub>1</sub>(E) BAR SPLICER ASSEMBLY FOR PRECAST FASCIA**

No. required = 7 - Abutment Panels



**#5 d(E) AND d<sub>2</sub>(E) BAR SPLICER ASSEMBLY FOR PRECAST FASCIA**

No. d(E) required = 4 - Abutment Panels  
No. d<sub>2</sub>(E) required = 18 - Abutment Panels



**DETAIL A**

COMPANY NAME: HRGreen  
PROJECT CONTACT: Michael G. Haralby  
DATE PLOTTED: 7/26/2011 11:05:16 AM  
FILE NAME: 8690412-E-PreFab.dgn  
PLOT DRIVER: pdfplot  
PEN TABLE: Struct 22x34.tbl



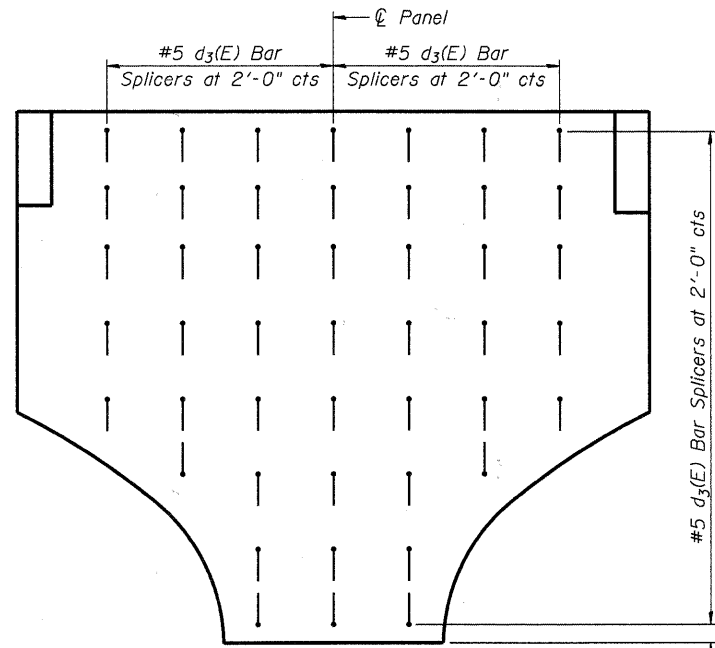
USER NAME = whood  
PLOT SCALE = N.T.S.  
PLOT DATE = 7/26/2011

DESIGNED - SSM  
CHECKED - RGD  
DRAWN - WJH  
CHECKED -

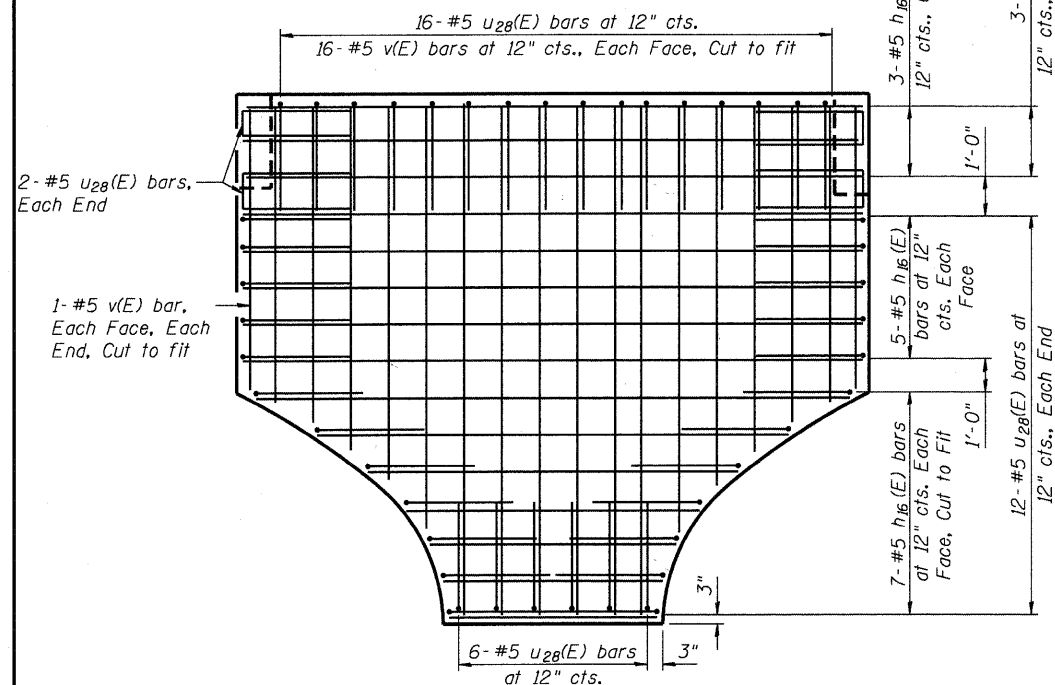
**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**PRECAST CONCRETE FASCIA PANEL - ABUTMENT**  
**STRUCTURE NO. 045-6005**  
SHEET NO. SE-26 OF SE-45 SHEETS

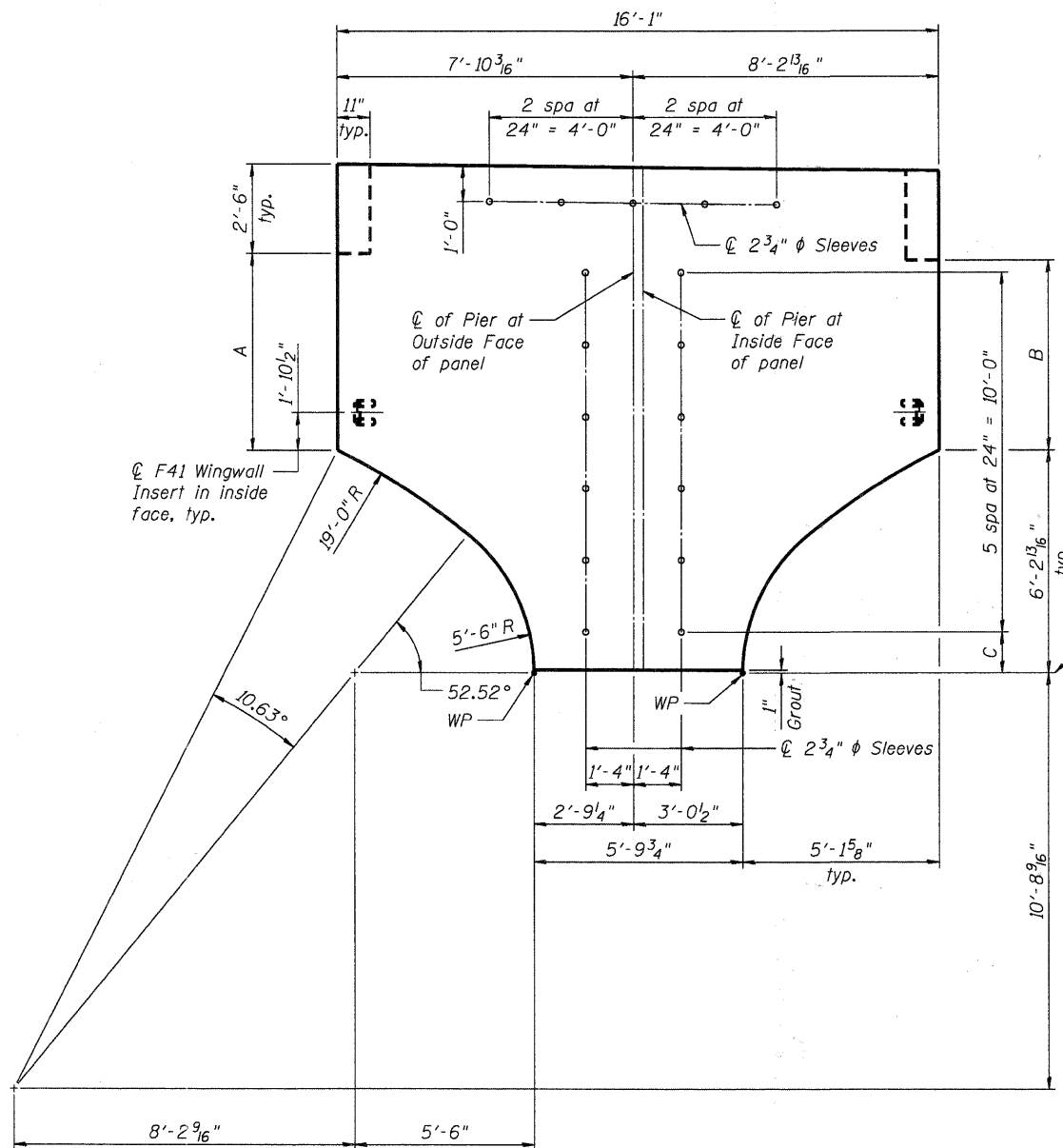
| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|--------------------|----------------|--------|---------------------------|-----------|
|                    | 07-00264-00-BR | KANE   | 164                       | 126       |
| CONTRACT NO. 63620 |                |        | ILLINOIS FED. AID PROJECT |           |



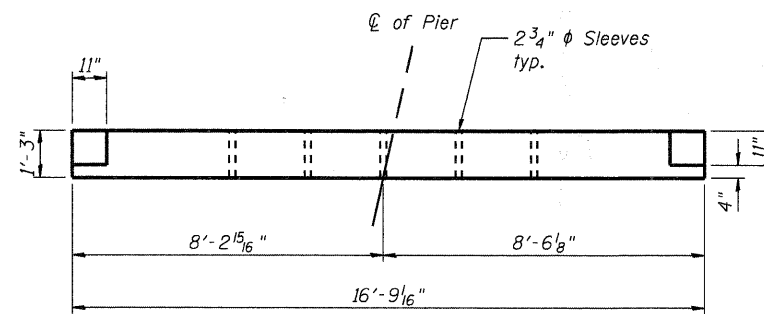
**BAR SPLICER LAYOUT**  
(46 Per Panel)



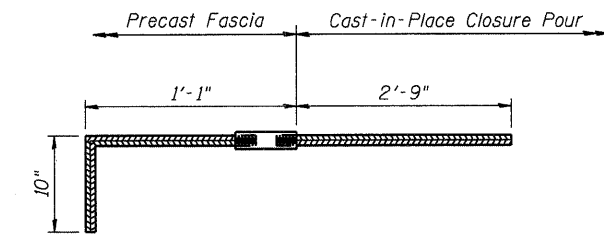
**PANEL ELEVATION - REBAR**



**PANEL ELEVATION**



**PANEL PLAN**



**#56 d3 (E) BAR SPLICER ASSEMBLY FOR PRECAST FASCIA**

No. required = 184

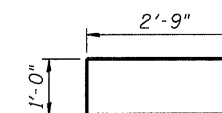
**FASCIA PANEL REINFORCEMENT**

| Bar                 | No. | Size | Length  | Shape |
|---------------------|-----|------|---------|-------|
| h <sub>16</sub> (E) | 120 | #5   | 15'-7"  | —     |
| u <sub>28</sub> (E) | 136 | #5   | 6'-6"   | ⊠     |
| v(E)                | 136 | #5   | 12'-10" | —     |

Approximate quantities for four (4) Fascia Panels

**PANEL DIMENSIONS**

|      | A         | B         | C       |
|------|-----------|-----------|---------|
| NP-1 | 4'-8 3/8" | 4'-7 7/8" | 1'-1"   |
| NP-2 | 4'-4 3/8" | 4'-5 3/4" | 9 7/8"  |
| SP-1 | 4'-5 7/8" | 4'-7 5/8" | 11 3/4" |
| SP-2 | 4'-7 3/8" | 4'-6"     | 11 1/2" |



**BAR u28(E)**

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 CLIENT: City of Aurora  
 FILE NAME: 06699472-E-17-06-05.dgn  
 PLOT DRIVER: parplot  
 PEN TABLE: Struct 22x34.tbl



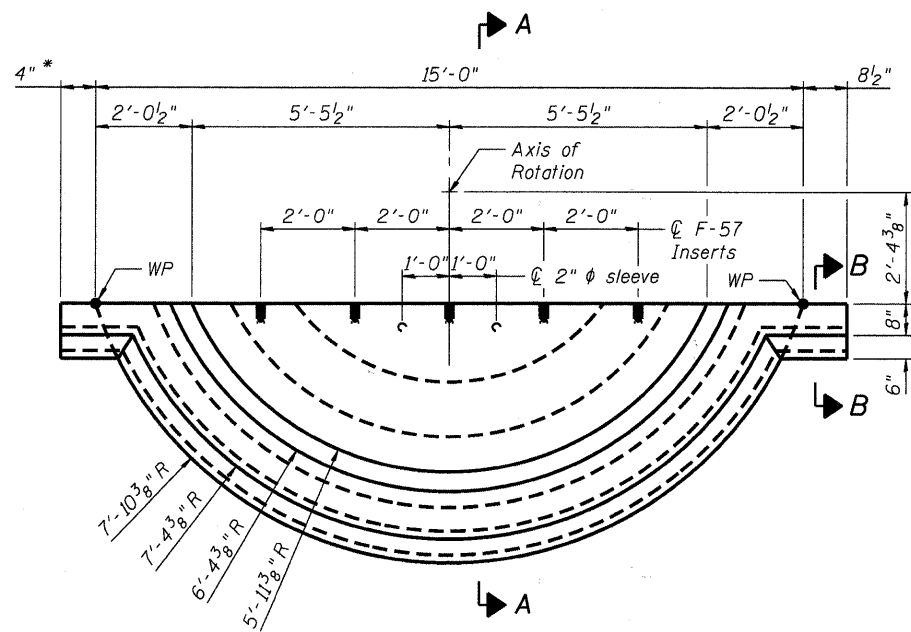
|                       |                |           |
|-----------------------|----------------|-----------|
| USER NAME = whood     | DESIGNED - SSM | REVISED - |
| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

**CITY OF AURORA**  
 DOWNER PLACE OVER THE EAST BRANCH  
 OF THE FOX RIVER

**PRECAST CONCRETE FASCIA PANEL - PIER**  
 STRUCTURE NO. 045-6005

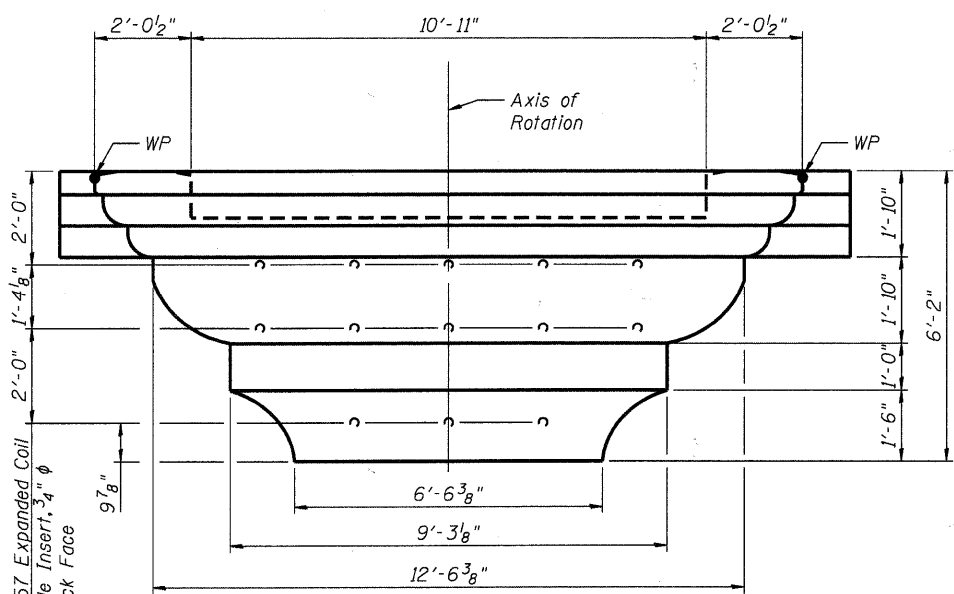
SHEET NO. SE-27 OF SE-45 SHEETS

|                           |                |        |                    |           |
|---------------------------|----------------|--------|--------------------|-----------|
| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|                           | 07-00264-00-BR | KANE   | 164                | 127       |
|                           |                |        | CONTRACT NO. 63620 |           |
| ILLINOIS FED. AID PROJECT |                |        |                    |           |

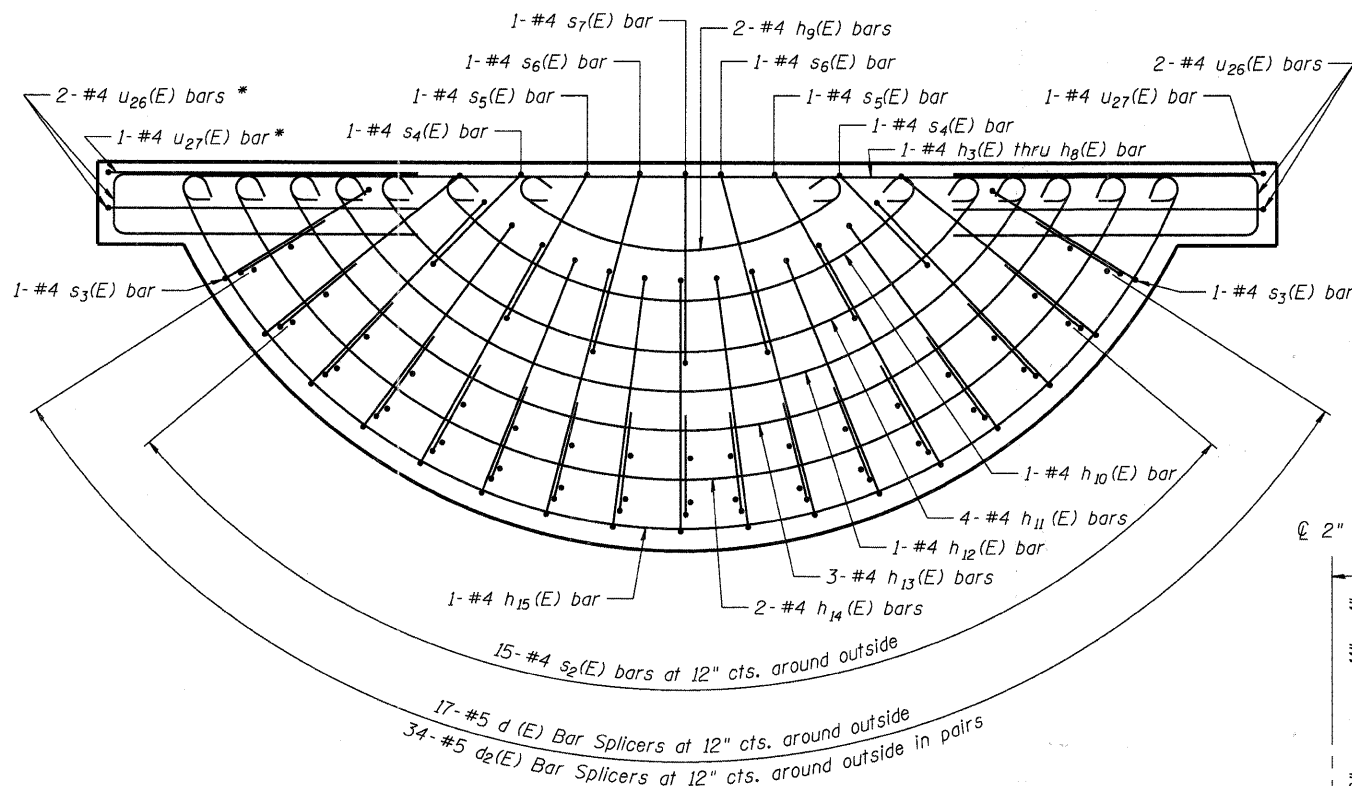


PLAN

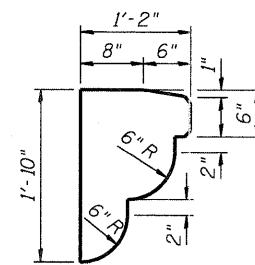
\* Finish curved coping square to WP (no return)  
For outlook at northeast corner of east abutment



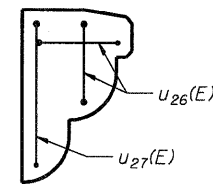
ELEVATION



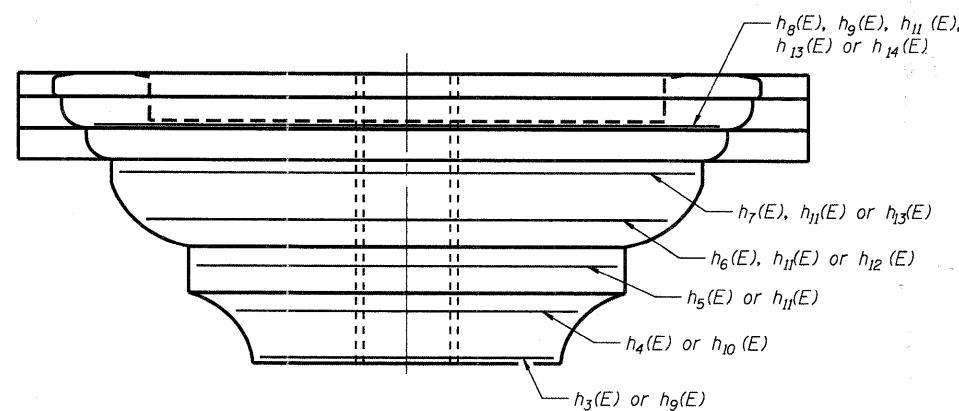
PLAN REBAR



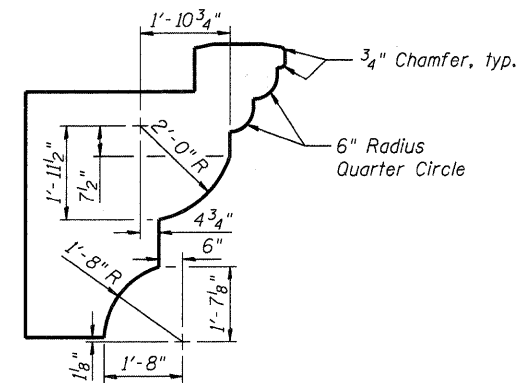
SECTION B-B



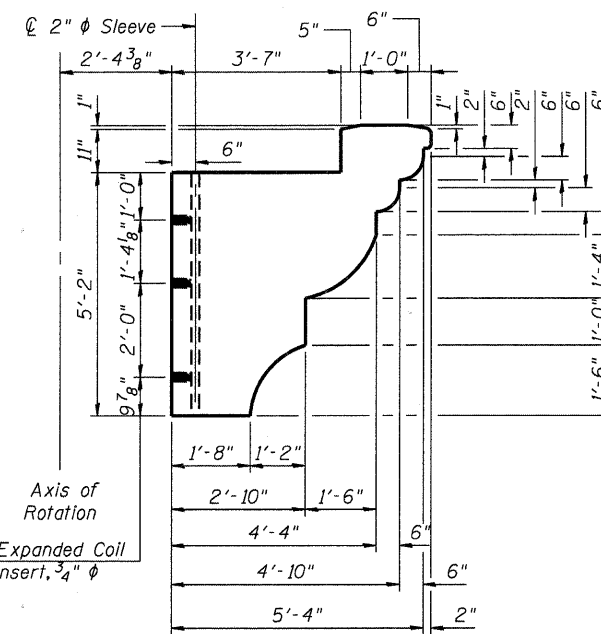
SECTION B-B REBAR



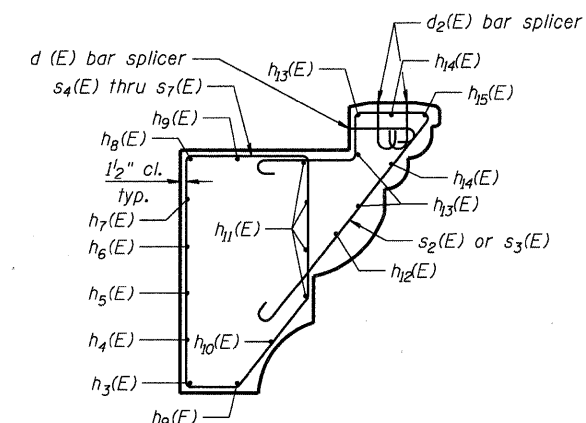
ELEVATION REBAR



SECTION A-A



SECTION A-A



SECTION A-A REBAR

COMPANY NAME: HRGreen  
PROJECT CONTACT: Michael G. Harding  
CLIENT: City of Aurora  
DATE PLOTTED: 7/26/2011 11:05:42 AM  
FILE NAME: 86090472-e-PreOut101.dwg  
PLOT DRIVER: pdfplot  
PEN TABLE: Struct 22x34.tbl



USER NAME = whoad  
PLOT SCALE = N.T.S.  
PLOT DATE = 7/26/2011

DESIGNED - SSM  
CHECKED - RGD  
DRAWN - WJH  
CHECKED -

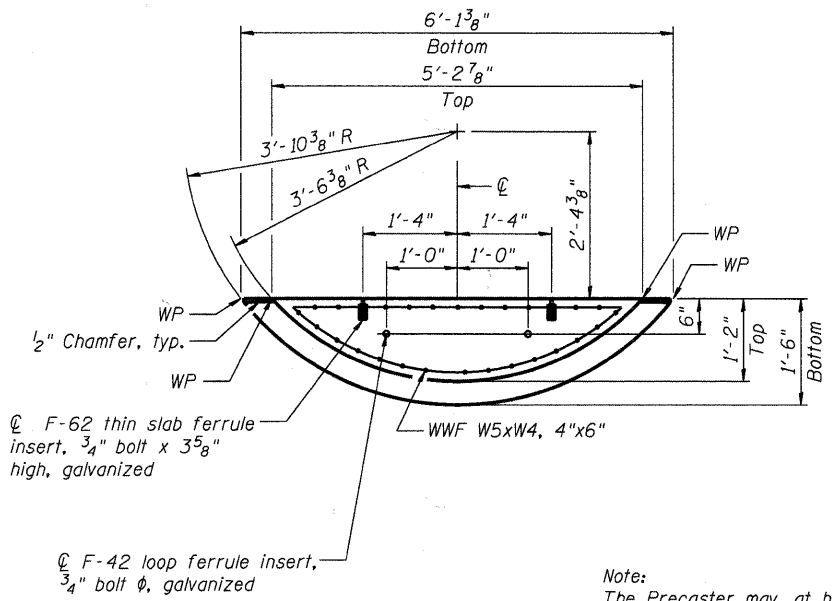
REVISED -  
REVISED -  
REVISED -  
REVISED -

CITY OF AURORA  
DOWNER PLACE OVER THE EAST BRANCH  
OF THE FOX RIVER

PRECAST CONCRETE OUTLOOK - TOP DETAILS  
STRUCTURE NO. 045-6005

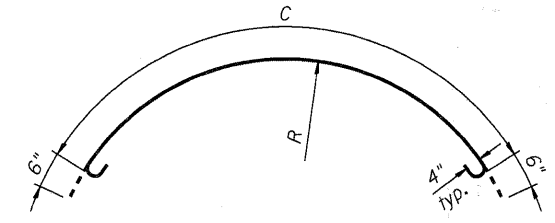
SHEET NO. SE-28 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|----------------|--------|--------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164          | 128       |
| CONTRACT NO. 63620        |                |        |              |           |
| ILLINOIS FED. AID PROJECT |                |        |              |           |

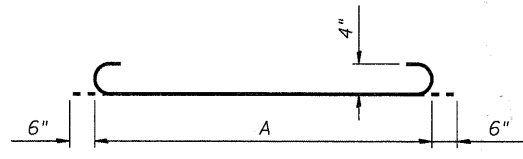


PLAN

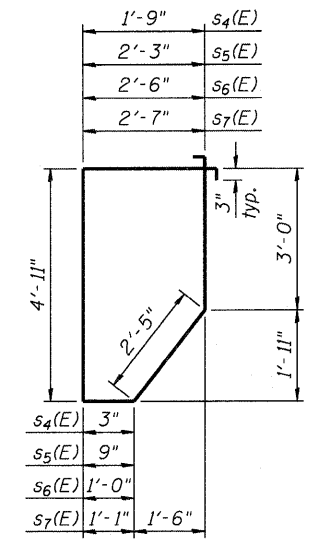
Note:  
The Precaster may, at his option, Cast the Outlook Bottom and the Pier Fascia Panels as one piece. Submit reinforcement details for review and approval.



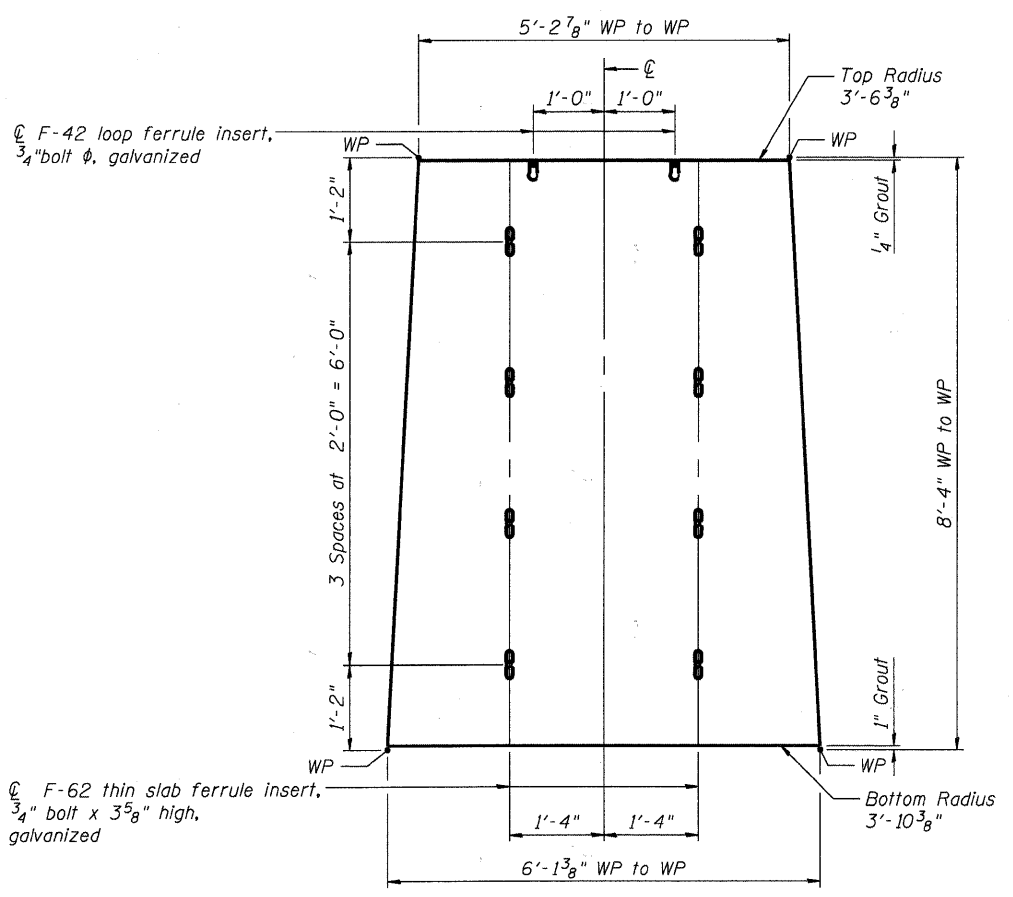
|   |           |             |             |             |             |             |             |
|---|-----------|-------------|-------------|-------------|-------------|-------------|-------------|
|   | $h_9(E)$  | $h_{10}(E)$ | $h_{11}(E)$ | $h_{12}(E)$ | $h_{13}(E)$ | $h_{14}(E)$ | $h_{15}(E)$ |
| R | 3'-7 1/4" | 4'-3 3/4"   | 5'-0 1/2"   | 5'-7 1/4"   | 6'-2"       | 6'-10 1/4"  | 7'-6 1/2"   |
| C | 5'-0"     | 7'-8"       | 10'-2"      | 12'-0"      | 13'-10"     | 16'-1"      | 18'-4"      |



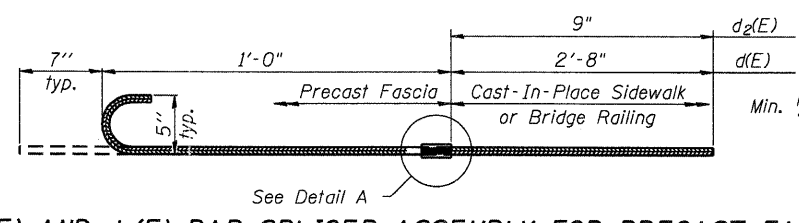
|   |          |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|----------|
|   | $h_3(E)$ | $h_4(E)$ | $h_5(E)$ | $h_6(E)$ | $h_7(E)$ | $h_8(E)$ |
| A | 4'-6"    | 6'-7"    | 8'-5"    | 9'-9"    | 11'-0"   | 12'-6"   |



BAR  $s_4(E)$  THRU  $s_7(E)$



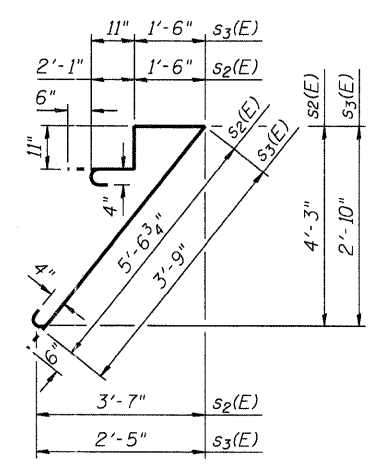
ELEVATION



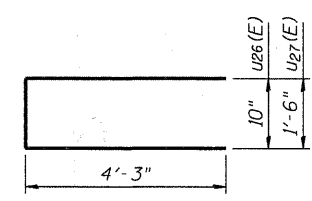
#5  $d(E)$  AND  $d_2(E)$  BAR SPLICER ASSEMBLY FOR PRECAST FASCIA

No.  $d(E)$  required = 85 - Outlooks  
No.  $d_2(E)$  required = 170 - Outlooks

DETAIL A



BARS  $s_2(E)$  AND  $s_3(E)$



BARS  $u_{26}(E)$  AND  $u_{27}(E)$

OUTLOOK REINFORCEMENT

| Bar         | No. | Size | Length  | Shape |
|-------------|-----|------|---------|-------|
| $s_2(E)$    | 75  | #4   | 11'-0"  |       |
| $s_3(E)$    | 10  | #4   | 7'-2"   |       |
| $s_4(E)$    | 10  | #4   | 12'-10" |       |
| $s_5(E)$    | 10  | #4   | 13'-10" |       |
| $s_6(E)$    | 10  | #4   | 14'-4"  |       |
| $s_7(E)$    | 5   | #4   | 14'-6"  |       |
| $h_3(E)$    | 5   | #4   | 5'-6"   |       |
| $h_4(E)$    | 5   | #4   | 7'-7"   |       |
| $h_5(E)$    | 5   | #4   | 8'-5"   |       |
| $h_6(E)$    | 5   | #4   | 9'-9"   |       |
| $h_7(E)$    | 5   | #4   | 11'-0"  |       |
| $h_8(E)$    | 5   | #4   | 12'-6"  |       |
| $h_9(E)$    | 10  | #4   | 6'-0"   |       |
| $h_{10}(E)$ | 5   | #4   | 8'-8"   |       |
| $h_{11}(E)$ | 20  | #4   | 11'-2"  |       |
| $h_{12}(E)$ | 5   | #4   | 13'-0"  |       |
| $h_{13}(E)$ | 15  | #4   | 14'-10" |       |
| $h_{14}(E)$ | 10  | #4   | 17'-1"  |       |
| $h_{15}(E)$ | 5   | #4   | 19'-4"  |       |
| $u_{26}(E)$ | 20  | #4   | 9'-4"   |       |
| $u_{27}(E)$ | 10  | #4   | 10'-0"  |       |

Approximate quantities for five (5) Outlook Assemblies

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PROJECT CONTACT: HRGreen  
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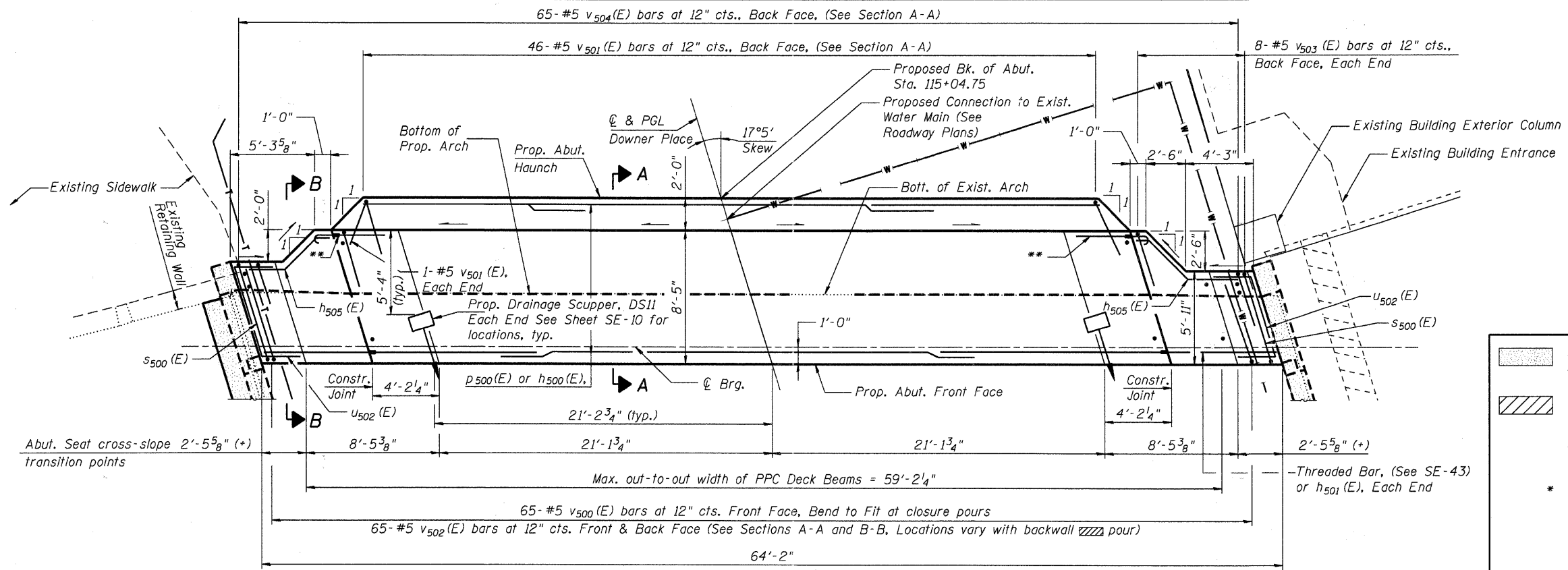
HRGreen.com  
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#194-001322

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| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
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CITY OF AURORA  
DOWNER PLACE OVER THE EAST BRANCH  
OF THE FOX RIVER

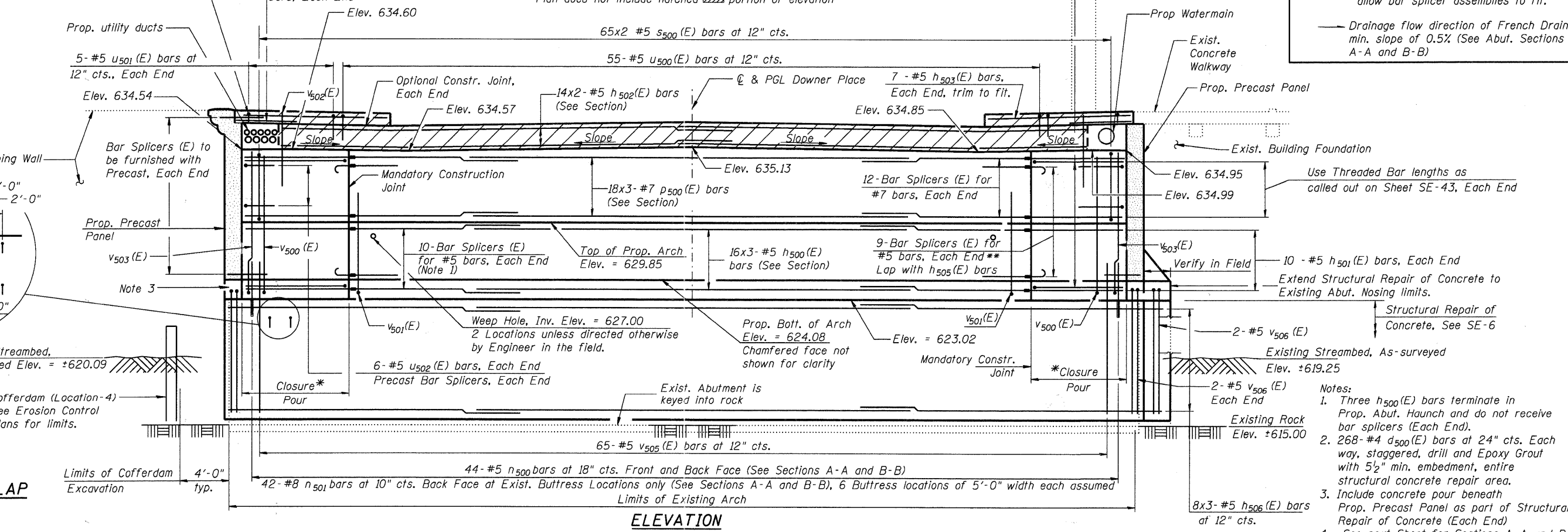
PRECAST CONCRETE OUTLOOK - BOTTOM DETAILS  
STRUCTURE NO. 045-6005  
SHEET NO. SE-29 OF SE-45 SHEETS

|                    |                |        |                           |           |
|--------------------|----------------|--------|---------------------------|-----------|
| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|                    | 07-00264-00-BR | KANE   | 164                       | 129       |
| CONTRACT NO. 63620 |                |        | ILLINOIS FED. AID PROJECT |           |



**PLAN**  
(Looking West)  
-Plan does not include hatched portion of elevation

Space bars and trim to avoid conflict with proposed utilities (typ.)



**ELEVATION**  
(Looking West)

**LEGEND**

- Precast Concrete to be erected Prior to Closure Pour of Abut.
- Concrete Backwall to be poured after all Deck Beams, Concrete Wearing Surface, Sidewalk and Approach Slab are installed. Paid for as "Concrete Superstructure".
- \* C.I.P. Abut. closure pour shall be installed after Precast Fascia Panels are erected and shall match geometry of Precast Arch at one end and C.I.P. Abut. at the other.
- \*\* At Back of Abut. use #5 bar splicer assemblies; bend and trim to fit threaded bar at closure pour. Adjust bars in back of Abut. as necessary to allow bar splicer assemblies to fit.
- Drainage flow direction of French Drains min. slope of 0.5% (See Abut. Sections A-A and B-B)

**MINIMUM BAR LAP**  
#5 = 2'-11"  
#7 = 4'-8"

- Notes:
1. Three h500(E) bars terminate in Prop. Abut. Haunch and do not receive bar splicers (Each End).
  2. 268-#4 d500(E) bars at 24" cts. Each way, staggered, drill and Epoxy Grout with 5 1/2" min. embedment, entire structural concrete repair area.
  3. Include concrete pour beneath Prop. Precast Panel as part of Structural Repair of Concrete (Each End)
  4. See next Sheet for Sections A-A and B-B.

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:05:50 AM  
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 PLOT DRIVER: pdfplot  
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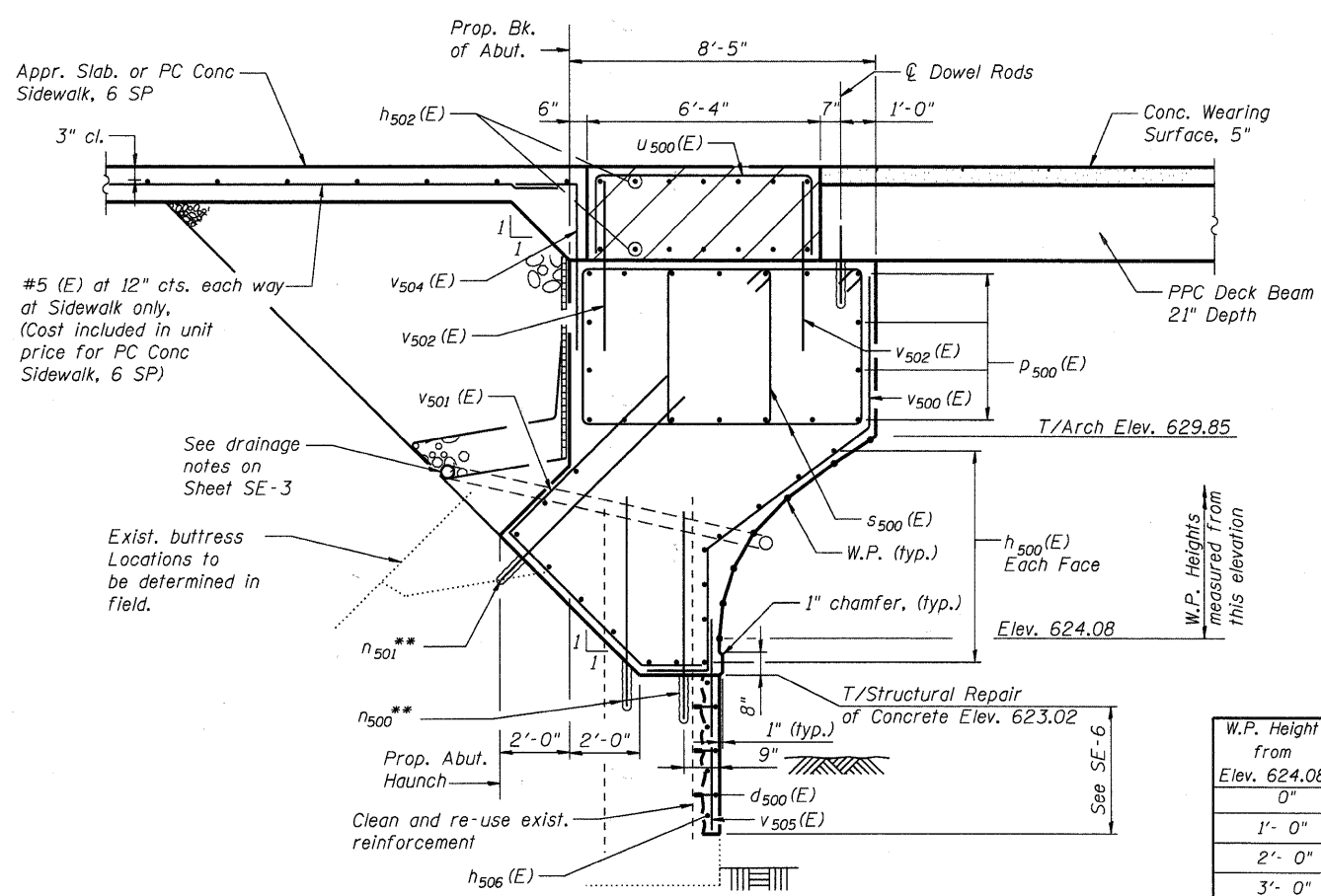


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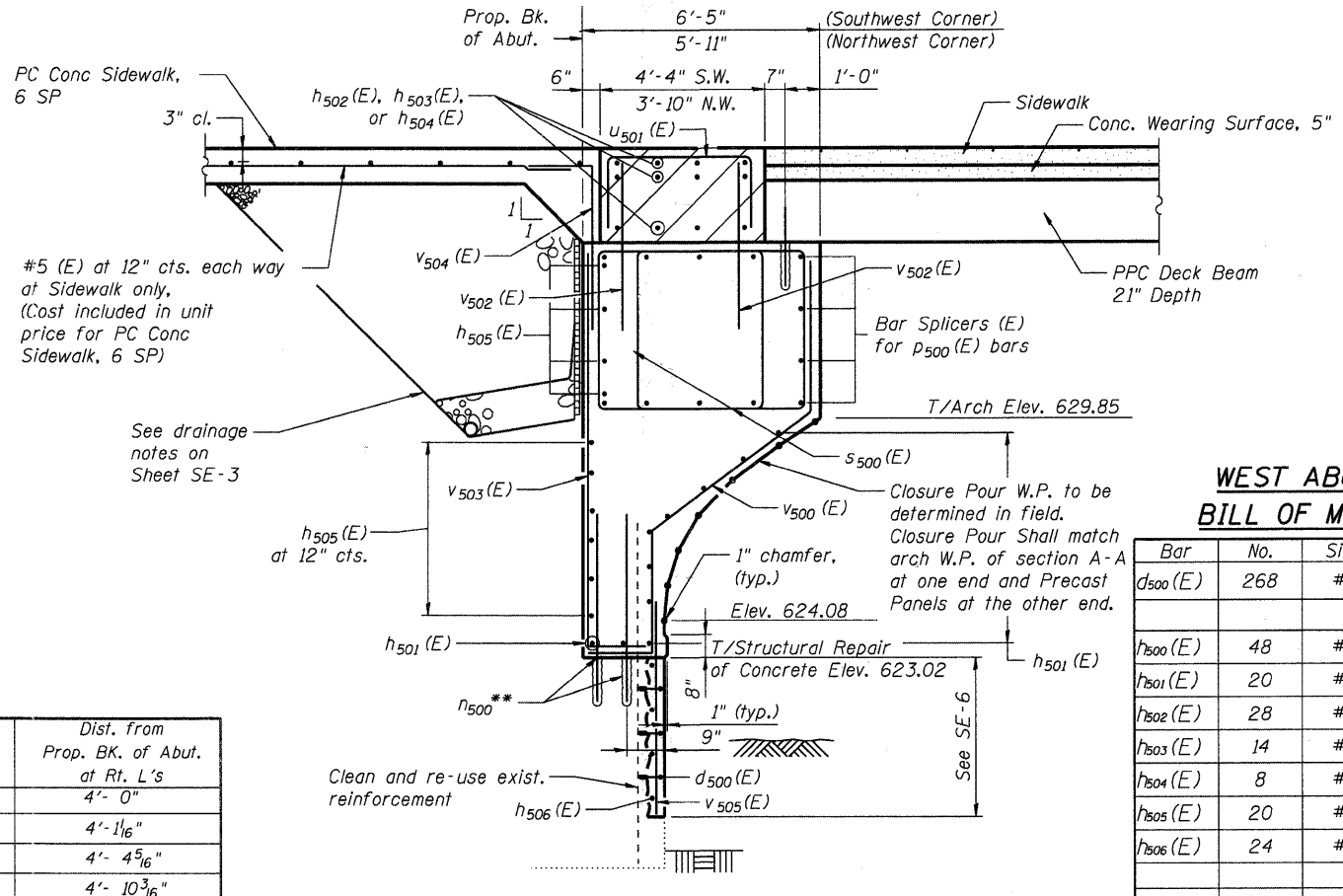
**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**WEST ABUTMENT**  
**STRUCTURE NO. 045-6005**  
SHEET NO. SE-30 OF SE-45 SHEETS

| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|--------------------|----------------|--------|---------------------------|-----------|
|                    | 07-00264-00-BR | KANE   | 164                       | 130       |
| CONTRACT NO. 63620 |                |        | ILLINOIS FED. AID PROJECT |           |



**SECTION A-A THRU ABUTMENT**  
Horizontal Dimensions at Rt. L's



**SECTION B-B THRU ABUTMENT**  
Horizontal Dimensions at Rt. L's

| W.P. Height from Elev. 624.08 | Dist. from Prop. BK. of Abut. at Rt. L's |
|-------------------------------|--|
| 0"                            | 4'-0"                                    |
| 1'-0"                         | 4'-1 1/16"                               |
| 2'-0"                         | 4'-4 5/16"                               |
| 3'-0"                         | 4'-10 3/16"                              |
| 4'-0"                         | 5'-7 13/16"                              |
| 5'-0"                         | 6'-10 13/16"                             |
| 5'-9 15/16"                   | 8'-2 1/8"                                |

**Notes:**  
\*\* = Drill and grout into existing concrete in conformance with Article 509.06 and furnish adhesive in conformance with Article 1027.01. The cost of drilling, cleaning and furnishing the adhesive shall be included under the contract unit price for "Reinforcement Bars" and will not be paid for separately. Follow the approved manufacturer's instructions except that the following minimum hole sizes and adhesive embedment lengths shall govern if the manufacturer calls for less:

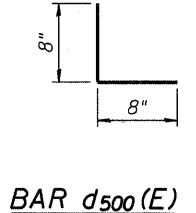
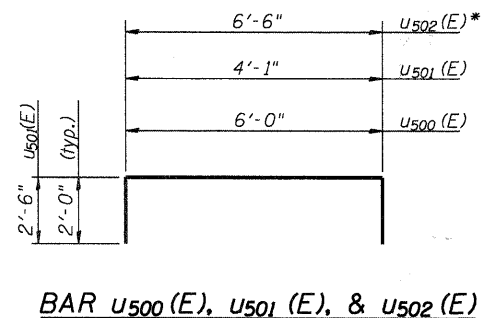
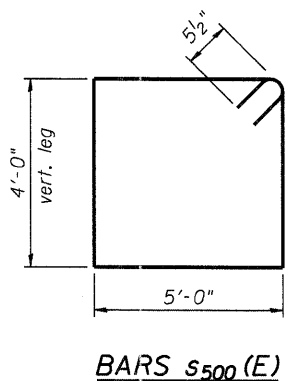
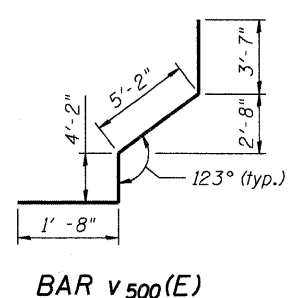
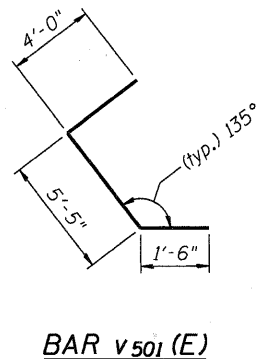
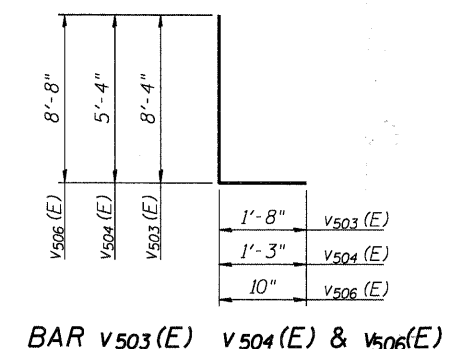
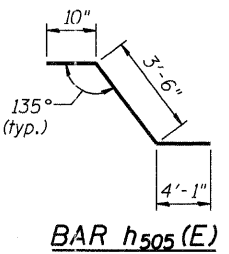
| Rebar Size | Min. Hole Size          | Min. Adhesive Embedment |
|------------|-------------------------|-------------------------|
| #8         | 1 1/8" Dia. X 12" deep  | 10 1/2"                 |
| #5         | 3/4" Dia. X 7 1/2" deep | 6 1/2"                  |

For #8 bars at existing buttress locations:

Exact layout and spacing of #8 n501 Bars will be adjusted by Engineer based upon field conditions uncovered after the back of the existing abutment is excavated. The same configuration and number of anchored rebars is anticipated with spacing and distribution modified to fit existing conditions.

See Roadway Plan and Profile and Intersection Details for limits of Conc. Sidewalk, 6 SP. Reinforcement shall be included from back of abutment to 14'-0" from back of abutment or first joint if shown in plan.

See pouring sequence notes on previous sheet.



**WEST ABUTMENT BILL OF MATERIAL**

| Bar                              | No. | Size    | Length  | Shape |
|----------------------------------|-----|---------|---------|-------|
| d500(E)                          | 268 | #4      | 1'-4"   | L     |
| h500(E)                          | 48  | #5      | 18'-9"  | —     |
| h501(E)                          | 20  | #5      | 6'-5"   | —     |
| h502(E)                          | 28  | #5      | 33'-3"  | —     |
| h503(E)                          | 14  | #5      | 10'-4"  | —     |
| h504(E)                          | 8   | #5      | 5'-3"   | —     |
| h505(E)                          | 20  | #5      | 8'-5"   | ~     |
| h506(E)                          | 24  | #5      | 23'-3"  | —     |
| h500                             | 88  | #5      | 1'-10"  | —     |
| h501                             | 42  | #8      | 4'-10"  | —     |
| D500(E)                          | 54  | #7      | 19'-7"  | —     |
| S500(E)                          | 130 | #5      | 18'-11" | □     |
| U500(E)                          | 55  | #5      | 10'-0"  | ┌┐    |
| U501(E)                          | 10  | #5      | 9'-1"   | ┌┐    |
| U502(E)                          | 12  | #5      | 10'-6"  | ┌┐    |
| V500(E)                          | 65  | #5      | 14'-7"  | └┘    |
| V501(E)                          | 48  | #5      | 10'-11" | <     |
| V502(E)                          | 130 | #5      | 4'-3"   | —     |
| V503(E)                          | 16  | #5      | 10'-0"  | L     |
| V504(E)                          | 65  | #5      | 6'-7"   | L     |
| V505(E)                          | 65  | #5      | 8'-8"   | —     |
| V506(E)                          | 6   | #5      | 9'-6"   | L     |
| Structure Excavation             |     | Cu. Yd. | 135.0   |       |
| Cofferdam Excavation             |     | Cu. Yd. | 82.5    |       |
| Cofferdam (Location - 4)         |     | Each    | 1       |       |
| Concrete Structures              |     | Cu. Yd. | 177.0   |       |
| Concrete Superstructure          |     | Cu. Yd. | 35.2    |       |
| Reinforcement Bars               |     | Pound   | 710     |       |
| Reinforcement Bars, Epoxy Coated |     | Pound   | 12,140  |       |
| Bar Splicers                     |     | Each    | 62      |       |
| Concrete Sealer                  |     | Sq. Ft. | 102     |       |

For details of Bar Splicers, see sheet SE-43

HRGreen  
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City of Aurora  
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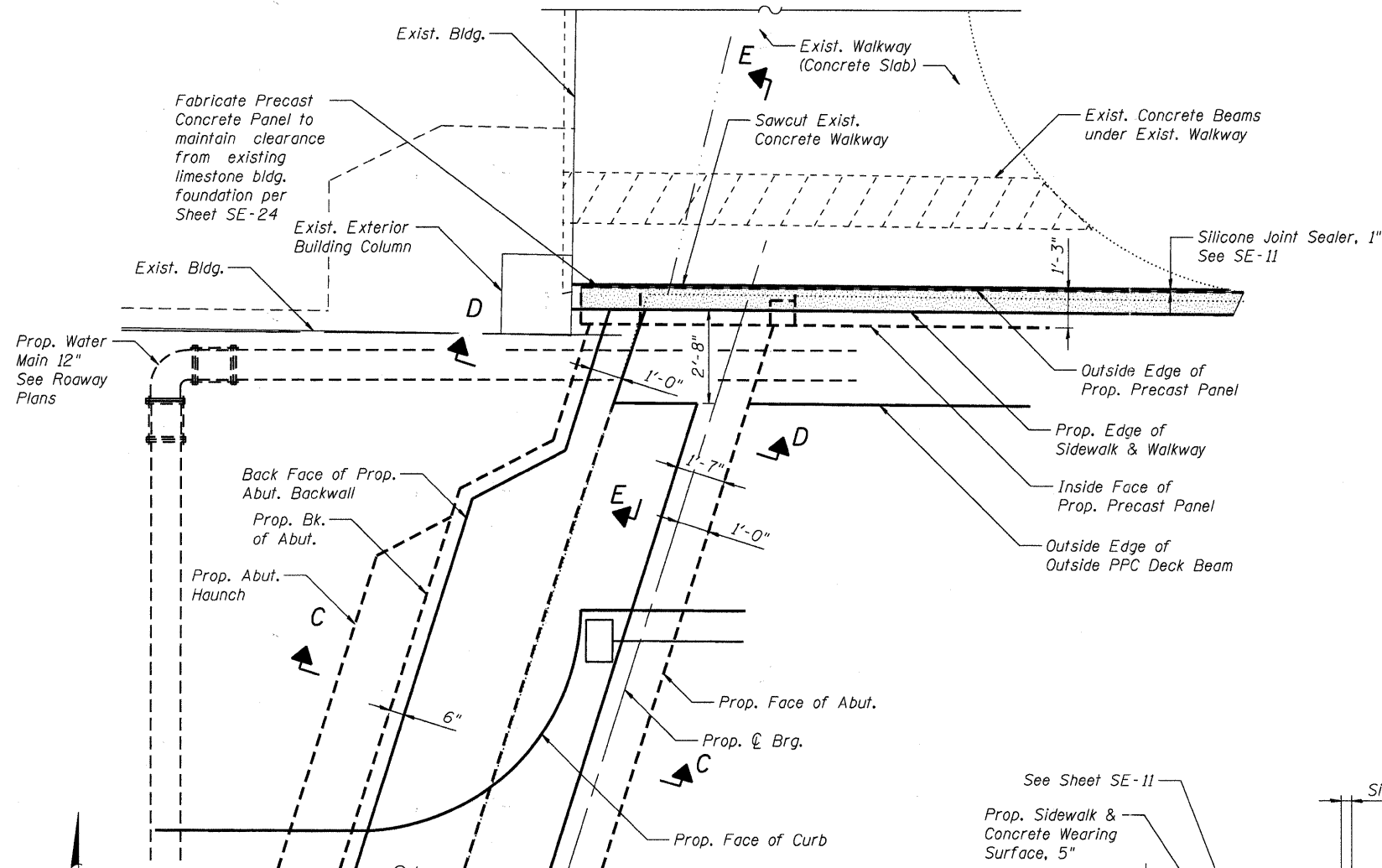
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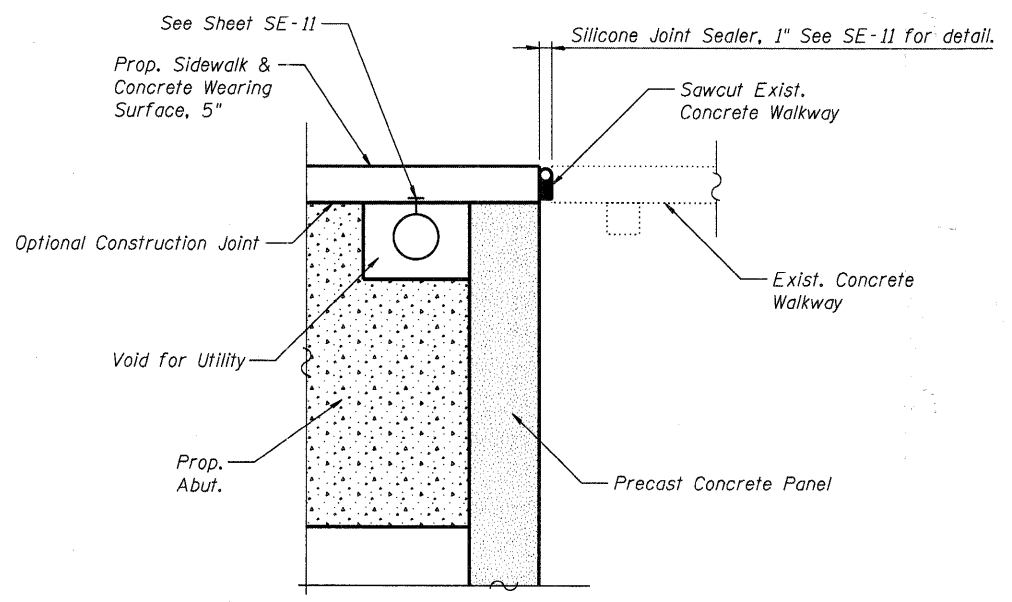
**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**WEST ABUTMENT DETAILS**  
**STRUCTURE NO. 045-6005**  
SHEET NO. SE-31 OF SE-45 SHEETS

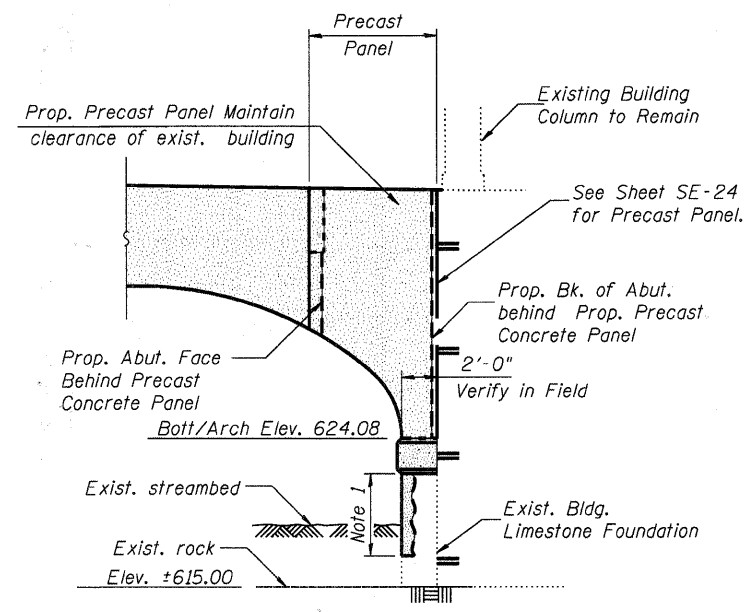
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|--------------------|----------------|--------|---------------------------|-----------|
|                    | 07-00264-00-BR | KANE   | 164                       | 131       |
| CONTRACT NO. 63620 |                |        | ILLINOIS FED. AID PROJECT |           |



**PLAN - N.W. CORNER OF WEST ABUTMENT**  
Railing not shown for clarity



**SECTION E-E**



**ELEVATION AT N.W. CORNER OF WEST ABUTMENT**

- Parallel to Roadway &  
- Railing not shown for clarity

Notes:  
1. Structural Repair of Concrete, See SE-6  
2. See next sheet for Sections C-C and D-D

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**HRGreen**  
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#194-01322

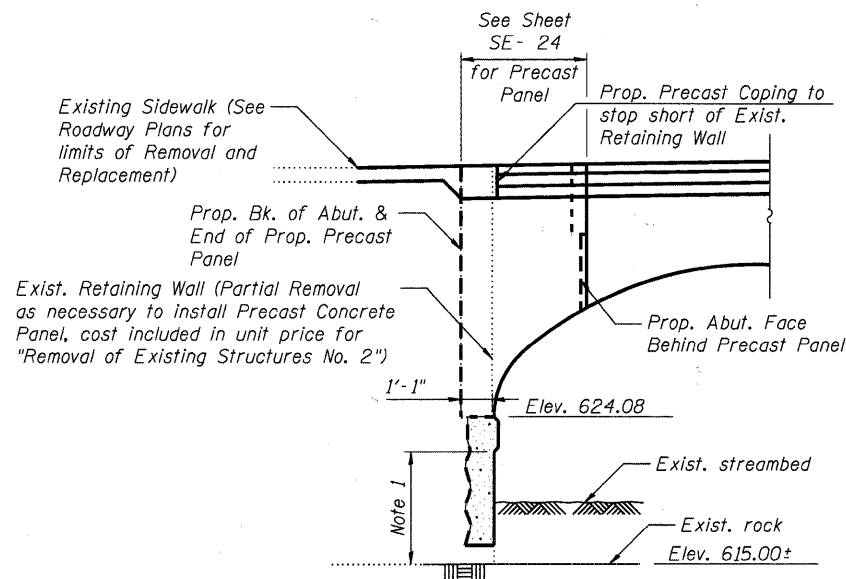
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| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**NORTHWEST CORNER DETAILS**  
**STRUCTURE NO. 045-6005**  
SHEET NO. SE-32 OF SE-45 SHEETS

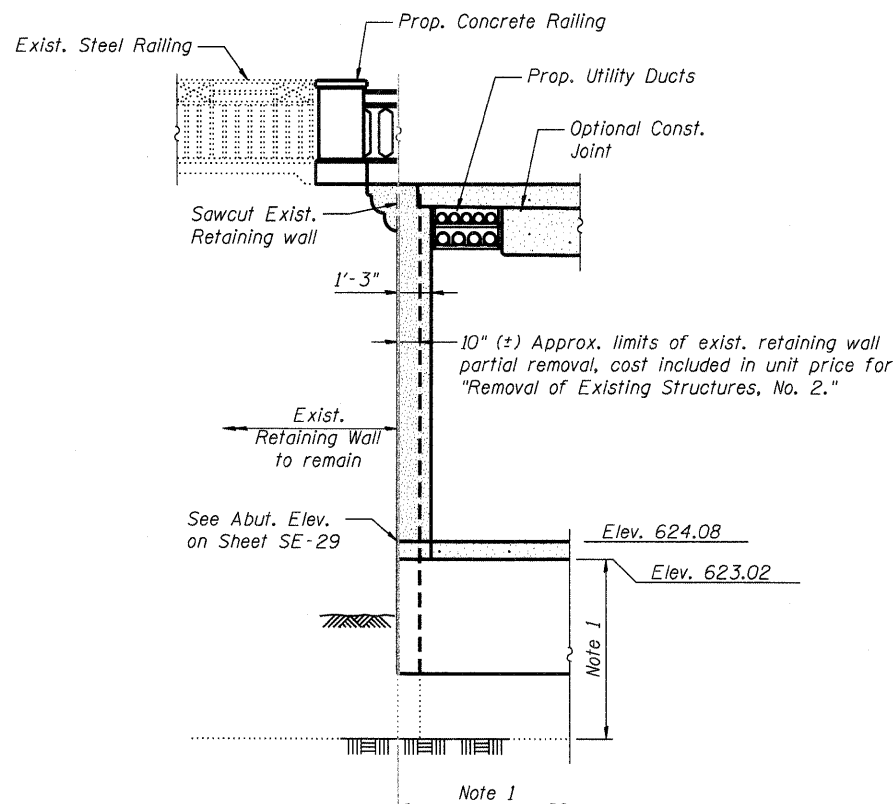
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| CONTRACT NO. 63620          |                |        |              |           |
| [ILLINOIS] FED. AID PROJECT |                |        |              |           |



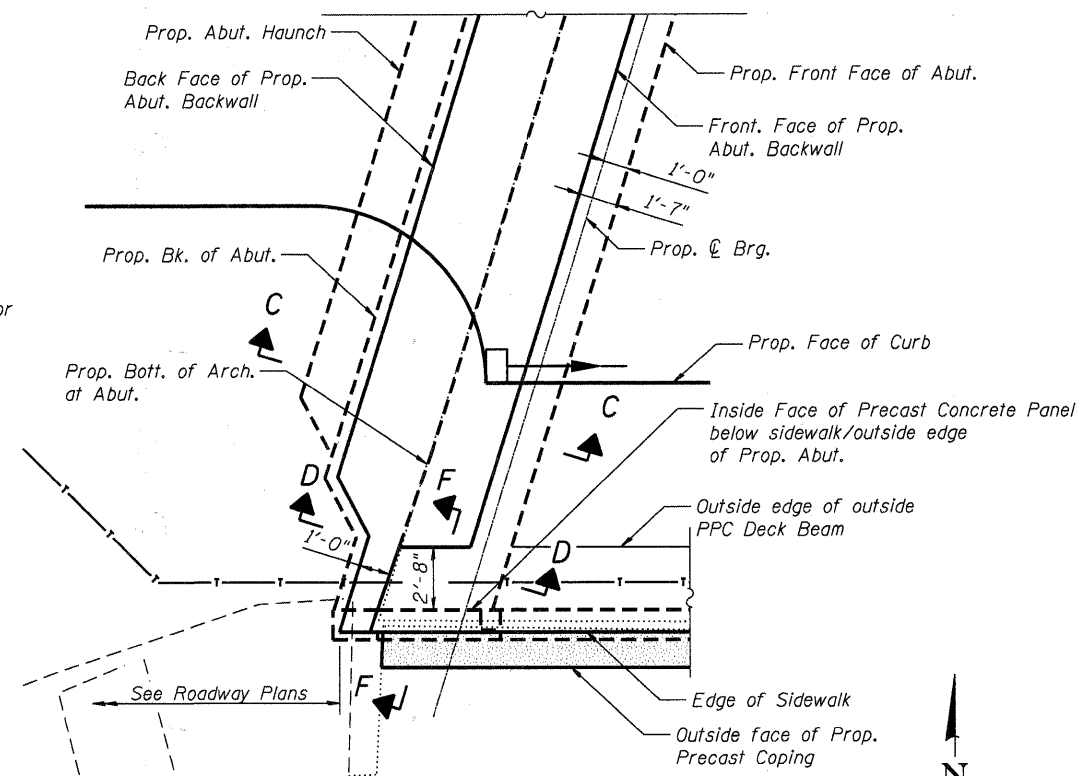


**ELEVATION AT S.W. CORNER OF WEST ABUTMENT**

Parallel to Roadway  $\text{\textcircled{C}}$   
Railing not shown for clarity

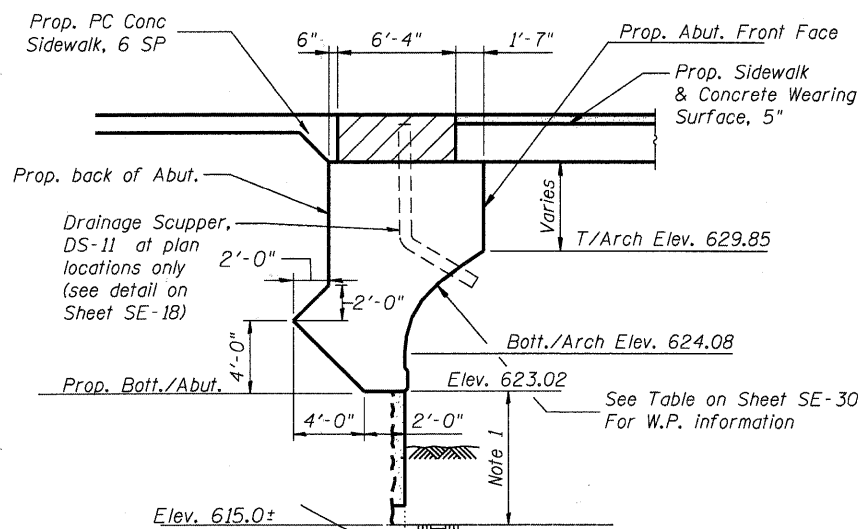
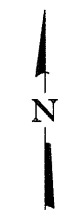


**SECTION F-F**



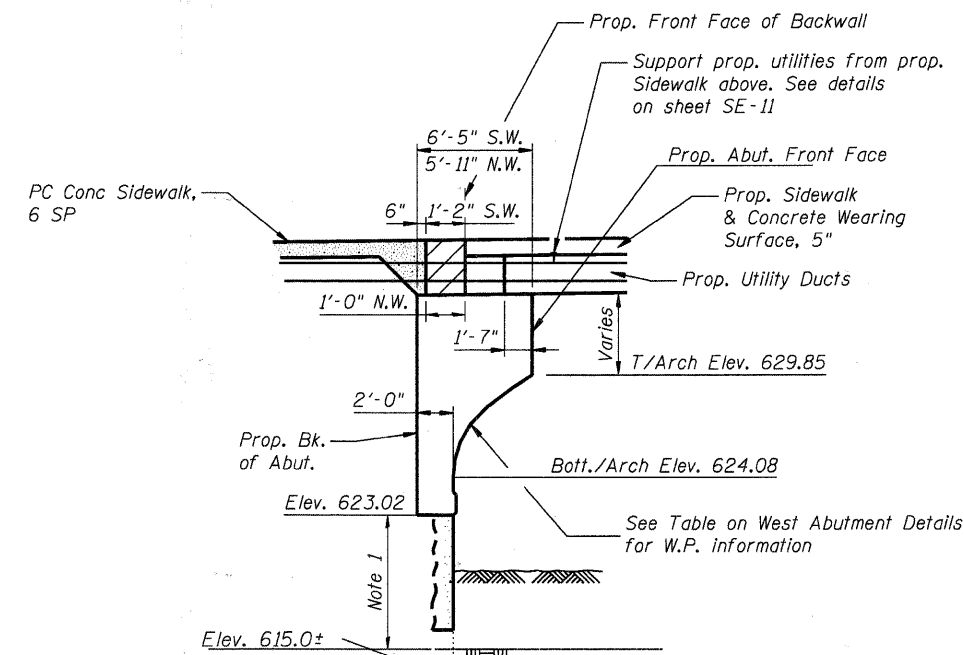
**PLAN - S.W. CORNER OF WEST ABUTMENT**

Railing not shown for clarity



**SECTION C-C THRU ABUTMENT**

Horizontal Dimensions at Rt. L's



**SECTION D-D THRU ABUTMENT**

Horizontal Dimensions at Rt. L's

S.W. = Southwest Corner  
N.W. = Northwest Corner (for dimensions that are different at N.W. corner)

Notes:  
1. Structural Repair of Concrete, See SE-6.

COMPANY NAME: HRGreen  
PROJECT CONTACT: Mark G. Harding  
CLIENT: City of Aurora  
DATE PLOTTED: 7/26/2011 11:06:04 AM  
FILE NAME: 06090472-a-b015cc-00  
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
**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**SOUTHWEST CORNER DETAILS**  
**STRUCTURE NO. 045-6005**

SHEET NO. SE-33 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO.          |
|---------------------------|----------------|--------|--------------|--------------------|
|                           | 07-00264-00-BR | KANE   | 164          | 133                |
|                           |                |        |              | CONTRACT NO. 63620 |
| ILLINOIS FED. AID PROJECT |                |        |              |                    |

**LEGEND**

-  Precast Concrete to be erected Prior to Closure Pour of Abut.
-  Concrete Backwall to be poured after all Deck Beams, Concrete Wearing Surface, Sidewalk and Approach Slab are installed. Paid for as "Concrete Superstructure".

\* C.I.P. Abut. closure pour shall be installed after Precast Fascia Panels are erected and shall match geometry of Precast Arch at one end and C.I.P. Abut. at the other.

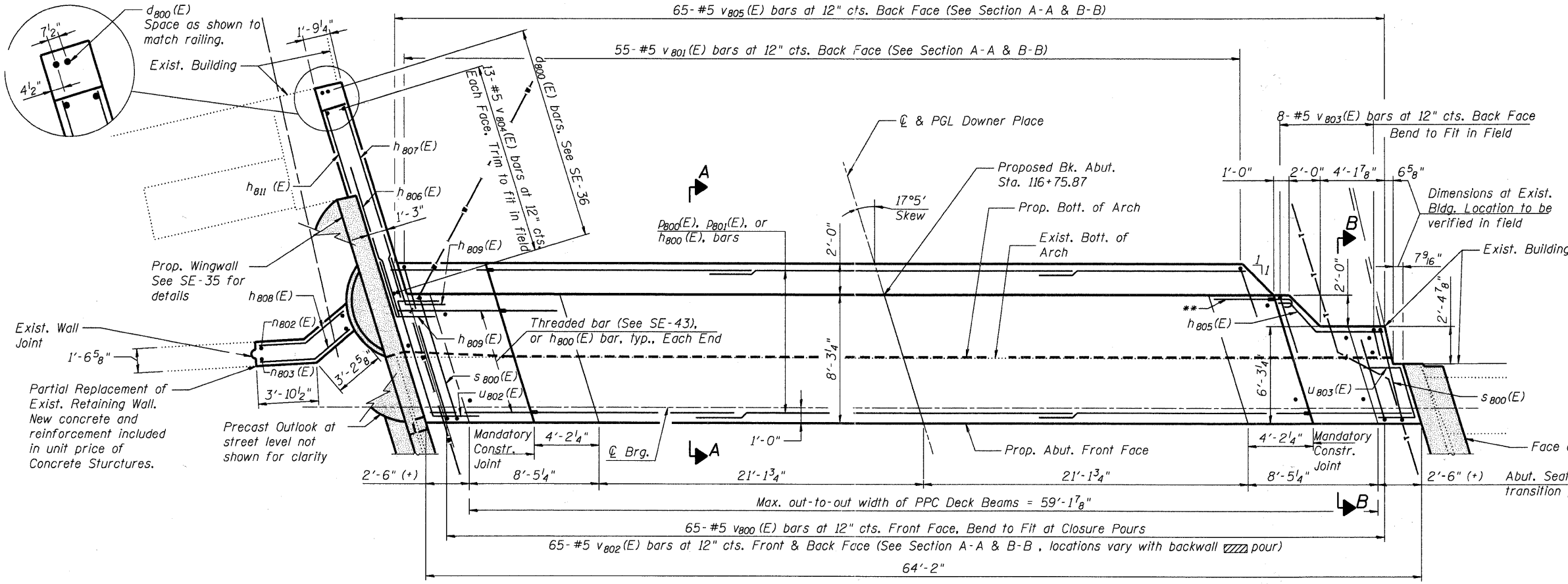
\*\* At Back of Abut. use #5 bar splicer assemblies; bend and trim to fit threaded bar at closure pour. Adjust bars in back of Abut. as necessary to allow bar splicer assemblies to fit.

— Drainage flow direction of French Drains, min. slope of 0.5% (See Abut. Sections)

**MINIMUM BAR LAP**

#5 = 2'-11"  
#7 = 4'-8"

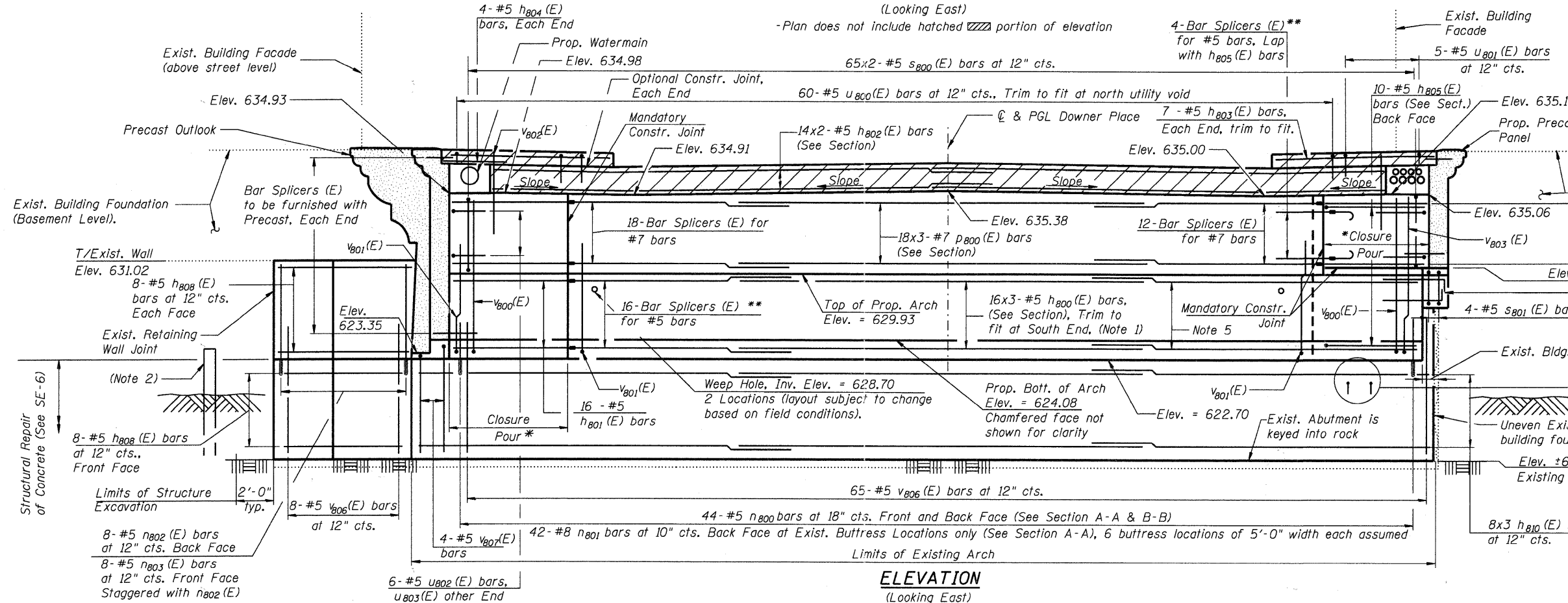
- Notes:
1. Three  $h_{800}(E)$  bars at south end terminate in Prop. Abut. Haunch (trim to fit).
  2. Cofferdam (Location-6) See Erosion Control Plans for limits.
  3. 280-#4  $d_{801}(E)$  bars at 24" cts. Each Way, staggered, drill and Epoxy Grout with 5/2" min. embedment, entire structural concrete repair area.
  4. See next Sheet for Sections A-A and B-B.
  5. At south end, bend  $h_{800}(E)$  bars to lap with  $h_{805}(E)$  bars.



**PLAN**

(Looking East)

-Plan does not include hatched portion of elevation



**ELEVATION**

(Looking East)

HRGreen  
114-001322

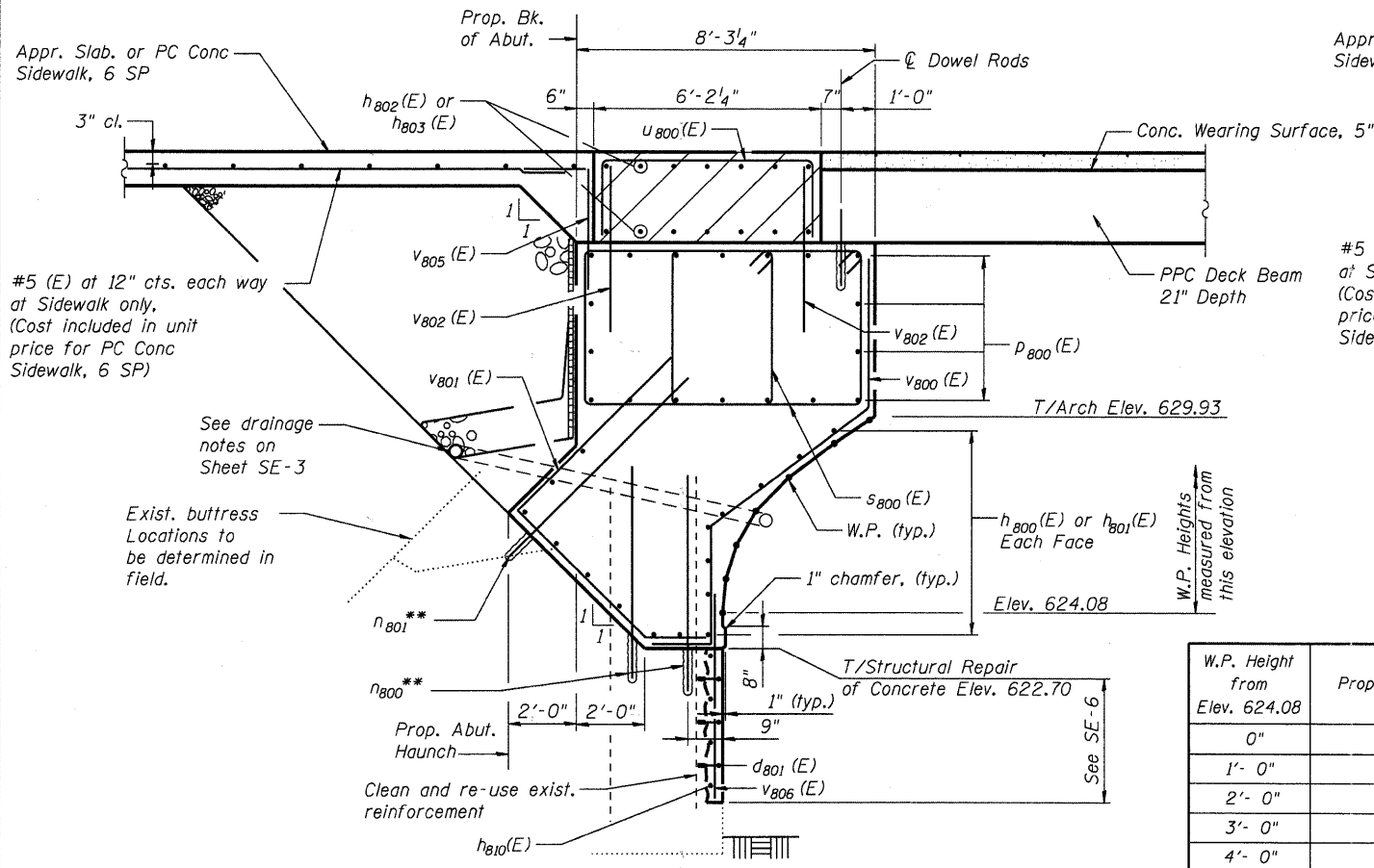
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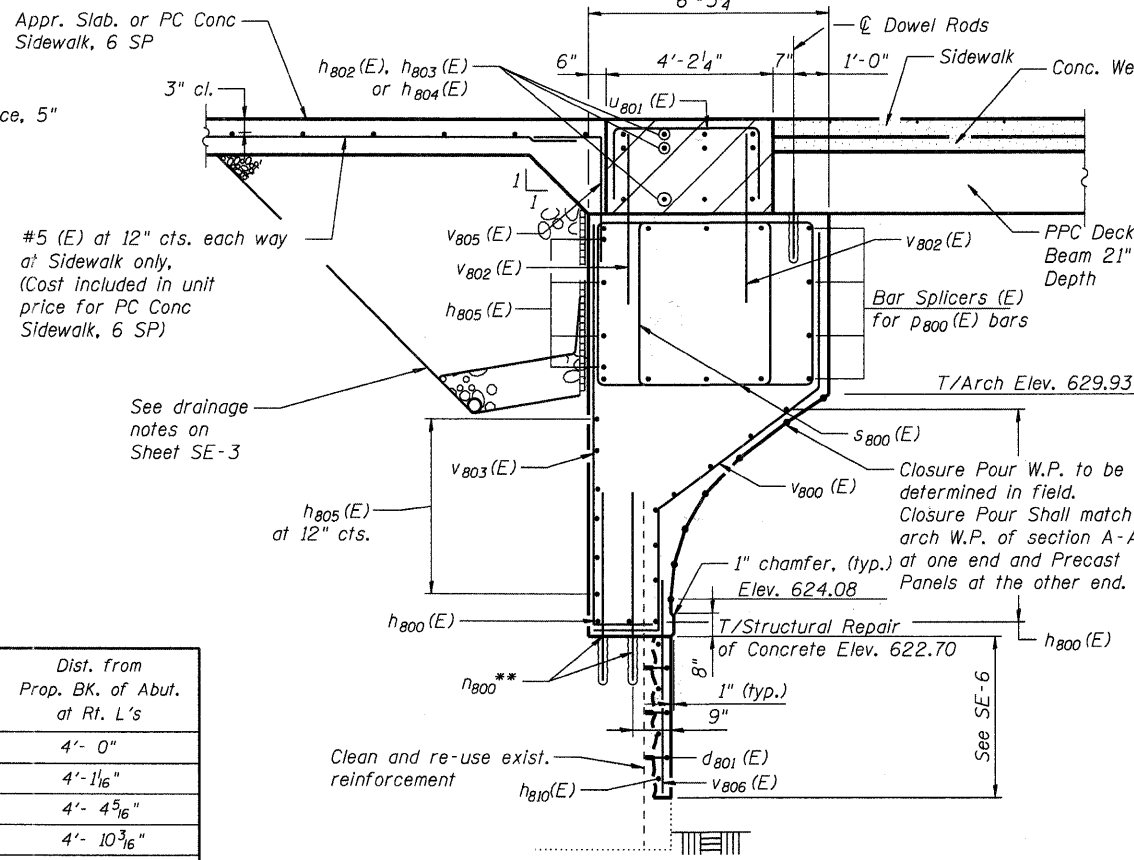
**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**EAST ABUTMENT**  
**STRUCTURE NO. 045-6005**  
SHEET NO. SE-34 OF SE-45 SHEETS

|                    |                |        |                           |           |
|--------------------|----------------|--------|---------------------------|-----------|
| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|                    | 07-00264-00-BR | KANE   | 164                       | 134       |
| CONTRACT NO. 63620 |                |        | ILLINOIS FED. AID PROJECT |           |



**SECTION A-A THRU ABUTMENT**  
Horizontal Dimensions at Rt. L's



**SECTION B-B THRU ABUTMENT**  
Horizontal Dimensions at Rt. L's

| W.P. Height from Elev. 624.08 | Dist. From Prop. BK. of Abut. at Rt. L's |
|-------------------------------|--|
| 0"                            | 4'-0"                                    |
| 1'-0"                         | 4'-1 1/16"                               |
| 2'-0"                         | 4'-4 5/16"                               |
| 3'-0"                         | 4'-10 3/16"                              |
| 4'-0"                         | 5'-7 13/16"                              |
| 5'-0"                         | 6'-10 13/16"                             |
| 5'-9 5/16"                    | 8'-2 5/8"                                |

**EAST ABUTMENT  
BILL OF MATERIAL**

| Bar                              | No. | Size    | Length  | Shape |
|----------------------------------|-----|---------|---------|-------|
| d800 (E)                         | 30  | #5      | 2'-7"   | U     |
| d801 (E)                         | 280 | #4      | 1'-4"   | L     |
| h800 (E)                         | 48  | #5      | 20'-9"  | —     |
| h801 (E)                         | 16  | #5      | 6'-5"   | —     |
| h802 (E)                         | 28  | #5      | 30'-11" | —     |
| h803 (E)                         | 14  | #5      | 10'-4"  | —     |
| h804 (E)                         | 8   | #5      | 5'-3"   | —     |
| h805 (E)                         | 10  | #5      | 7'-9"   | —     |
| h806 (E)                         | 15  | #5      | 10'-9"  | —     |
| h807 (E)                         | 30  | #6      | 14'-0"  | —     |
| h808 (E)                         | 24  | #5      | 6'-6"   | —     |
| h809 (E)                         | 41  | #5      | 6'-1"   | —     |
| h810 (E)                         | 24  | #5      | 24'-1"  | —     |
| h811 (E)                         | 15  | #5      | 7'-9"   | —     |
| h812 (E)                         | 6   | #5      | 5'-3"   | L     |
| n800                             | 88  | #5      | 1'-10"  | —     |
| n801                             | 42  | #8      | 4'-10"  | —     |
| n802 (E)                         | 8   | #5      | 9'-4"   | —     |
| n803 (E)                         | 8   | #5      | 9'-4"   | —     |
| n804                             | 12  | #5      | 1'-10"  | —     |
| n800 (E)                         | 54  | #7      | 19'-7"  | —     |
| s800 (E)                         | 130 | #5      | 19'-11" | —     |
| s801 (E)                         | 4   | #5      | 9'-9"   | —     |
| u800 (E)                         | 60  | #5      | 10'-0"  | —     |
| u801 (E)                         | 5   | #5      | 9'-1"   | —     |
| u802 (E)                         | 6   | #5      | 12'-3"  | —     |
| u803 (E)                         | 6   | #5      | 7'-8"   | —     |
| v800 (E)                         | 65  | #5      | 14'-9"  | —     |
| v801 (E)                         | 55  | #5      | 10'-11" | —     |
| v802 (E)                         | 130 | #5      | 4'-3"   | —     |
| v803 (E)                         | 8   | #5      | 12'-10" | L     |
| v804 (E)                         | 26  | #5      | 12'-11" | —     |
| v805 (E)                         | 65  | #5      | 6'-7"   | L     |
| v806 (E)                         | 73  | #5      | 8'-8"   | —     |
| v807 (E)                         | 4   | #5      | 9'-6"   | L     |
| Structure Excavation             |     | Cu. Yd. | 160.2   |       |
| Cofferdam (Location - 6)         |     | Each    | 0.5     |       |
| Concrete Structures              |     | Cu. Yd. | 192.0   |       |
| Concrete Superstructure          |     | Cu. Yd. | 35.8    |       |
| Reinforcement Bars               |     | Pound   | 740     |       |
| Reinforcement Bars, Epoxy Coated |     | Pound   | 14,350  |       |
| Bar Splicers                     |     | Each    | 51      |       |
| Concrete Sealer                  |     | Sq. Ft. | 102     |       |

For details of Bar Splicers, see sheet SE-43

**Notes:**  
 \*\* = Drill and grout into existing concrete in conformance with Article 509.06 and furnish adhesive in conformance with Article 1027.01. The cost of drilling, cleaning and furnishing the adhesive shall be included under the contract unit price for "Reinforcement Bars" and will not be paid for separately. Follow the approved manufacturer's instructions except that the following minimum hole sizes and adhesive embedment lengths shall govern if the manufacturer calls for less:

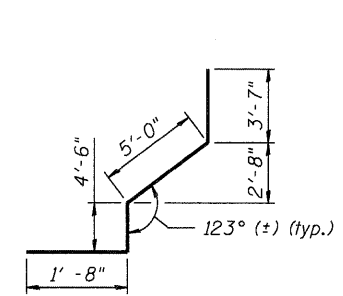
| Rebar Size | Min. Hole Size          | Min. Adhesive Embedment |
|------------|-------------------------|-------------------------|
| #8         | 1 1/2" Dia. X 12" deep  | 10 1/2"                 |
| #5         | 3/4" Dia. X 7 1/2" deep | 6 1/2"                  |

For #8 bars at existing buttress locations:

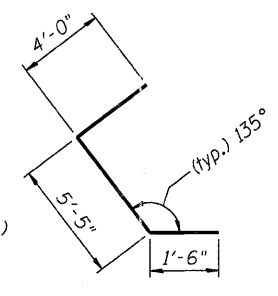
Exact layout and spacing of #8 n801 Bars will be adjusted by Engineer based upon field conditions uncovered after the back of the existing abutment is excavated. The same configuration and number of anchored rebars is anticipated with spacing and distribution modified to fit existing conditions.

See Roadway Plan and Profile and Intersection Details for limits of Conc. Sidewalk, 6 SP. Reinforcement shall be included from back of abutment to 14'-0" from back of abutment or first joint if shown in plan.

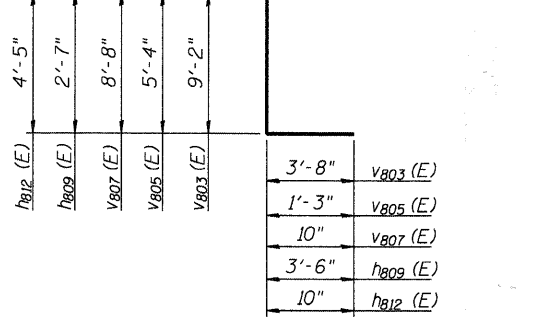
See Pouring sequence notes on previous sheet.



**BAR v800 (E)**

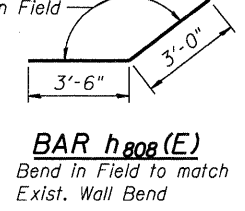


**BAR v801 (E)**

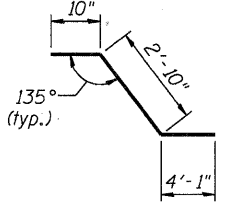


**BARS v803 (E), v805 (E), h809 (E) & h812 (E)**

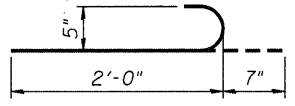
adjust bend of h809 (E) in field to fit as necessary trim v803 (E) to fit



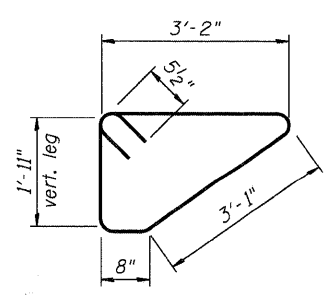
**BAR h808 (E)**  
Bend in field to match Exist. Wall Bend



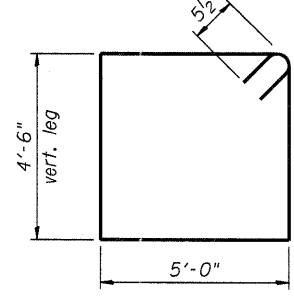
**BAR h805 (E)**



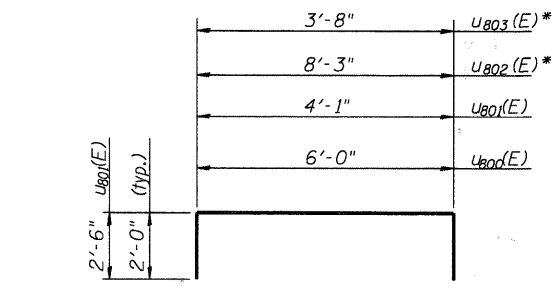
**BAR d800 (E)**



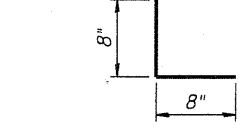
**BARS s801 (E)**



**BARS s800 (E)**



**BAR u800 (E), u801 (E), u802 (E) & u803 (E)**



**BAR d801 (E)**

\* = bend to fit skew

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:06:15 AM  
 FILE NAME: 86090472-e-Abut1.dgn  
 PLOT DRIVER: pdt.plt  
 PEN TABLE: Struct 22x34.tbl

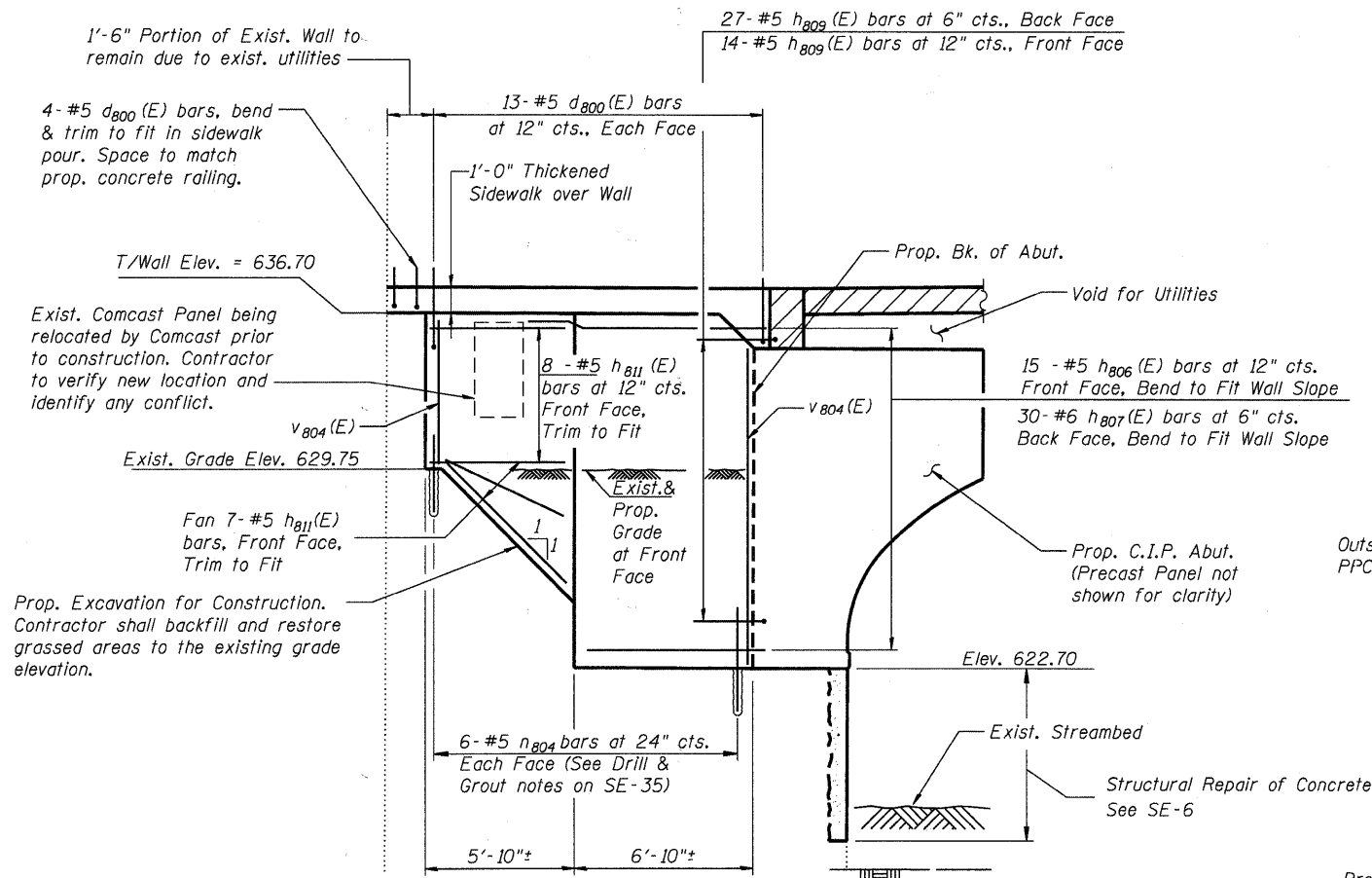
**HRGreen**  
 HRGreen.com  
 Illinois Professional Design Firm  
 #184-001322

| USER NAME = whood     | DESIGNED - JMW | REVISED - |
|-----------------------|----------------|-----------|
| CHECKED - RGD         | CHECKED - RGD  | REVISED - |
| PLOT SCALE = N.T.S.   | DRAWN - WJH    | REVISED - |
| PLOT DATE = 7/26/2011 | CHECKED -      | REVISED - |

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

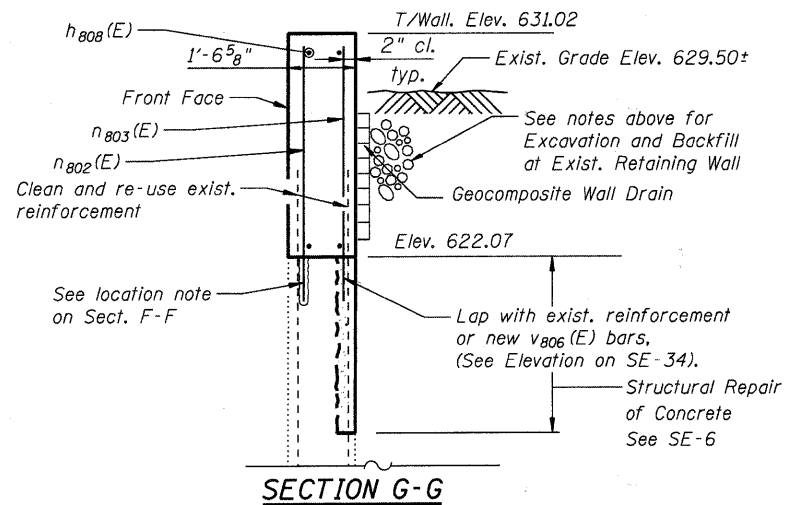
**EAST ABUTMENT DETAILS**  
**STRUCTURE NO. 045-6005**  
 SHEET NO. SE-35 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---------------------------|----------------|--------|--------------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164                | 135       |
|                           |                |        | CONTRACT NO. 63620 |           |
| ILLINOIS FED. AID PROJECT |                |        |                    |           |



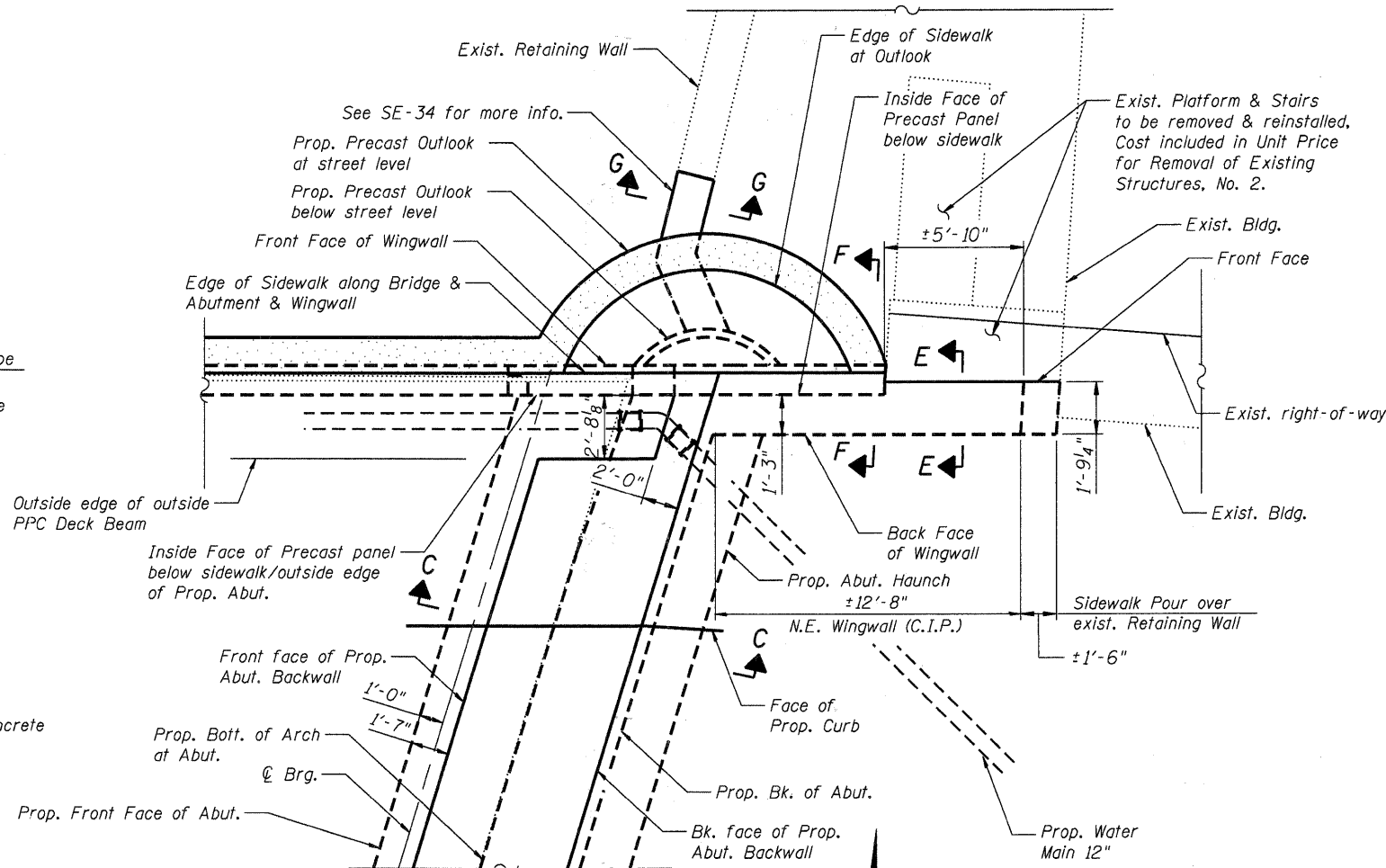
**ELEVATION AT N.E. WINGWALL & EXISTING RETAINING WALL**

- Prop. Precast Elements, railing and exist. retaining wall perpendicular to bridge not shown for clarity.
- Excavation for wingwall and retaining wall construction to be paid for as Structural Excavation.
- Backfill to existing grade Elev. to be paid for as Porous Granular Embankment (Special). Cost of restoration of grass area to be included in the unit price of Sodding (See Roadway Plans).



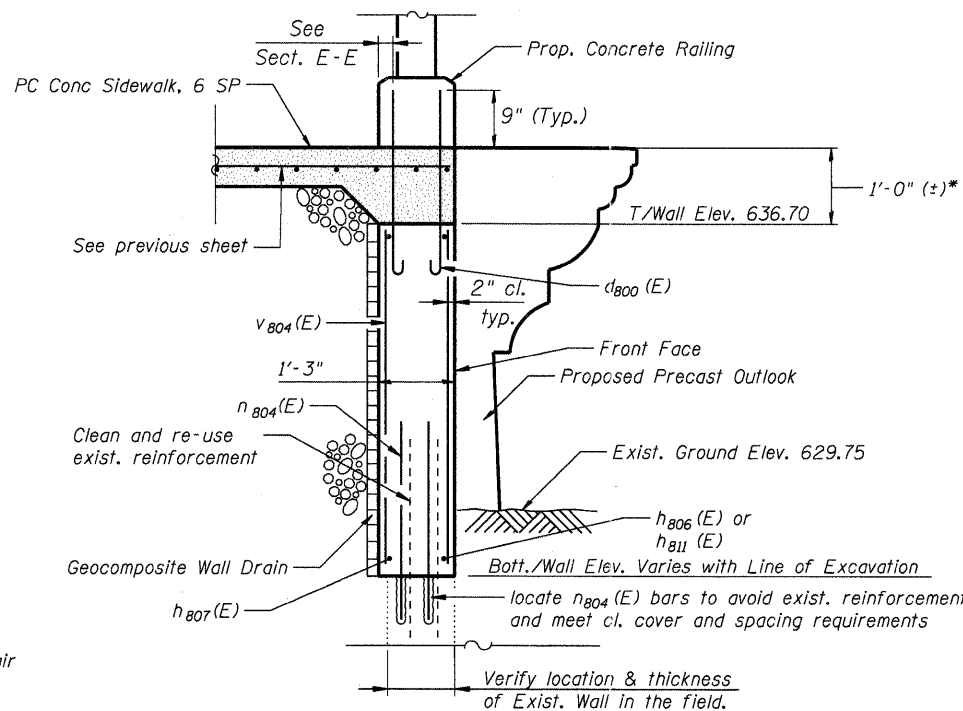
**SECTION G-G**

See Sheet SE-6 for Demolition Details, Sheet SE-35 for bar bends, & Sheet SE-34 for bar call-outs



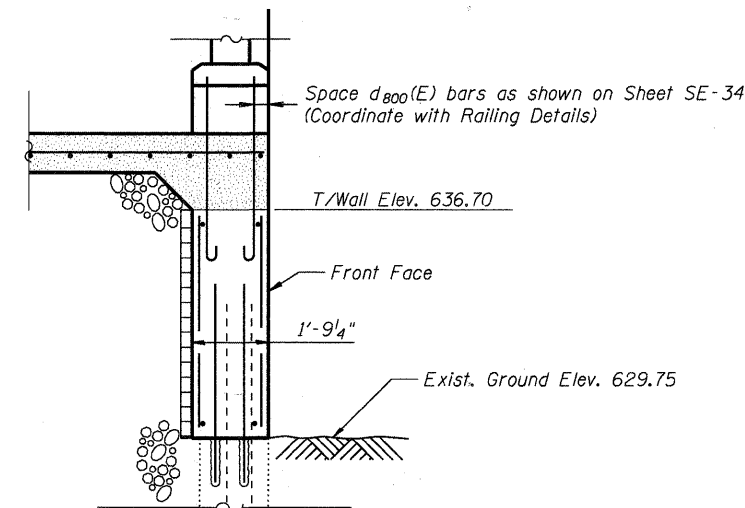
**PLAN - N.E. CORNER EAST ABUTMENT**

-Railing not shown for clarity  
See Precast Concrete Fascia Panel-Abutment Details and Precast Concrete Outlook Details for additional information.



**SECTION F-F**

\*Prop. sidewalk elevation(s) to match existing sidewalk elevations at building exterior & top of exist. stair platform



**SECTION E-E**

See Section F-F for more information

Notes:  
1. See next sheet for Section C-C

HRGreen  
 PROJECT CONTACT:  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 10:06:20 AM  
 FILE NAME: 8650412-E-EN-INC.dgn  
 PLOT DRIVER: pdfplot  
 PLOT TABLE: Struct 22x34.tbl



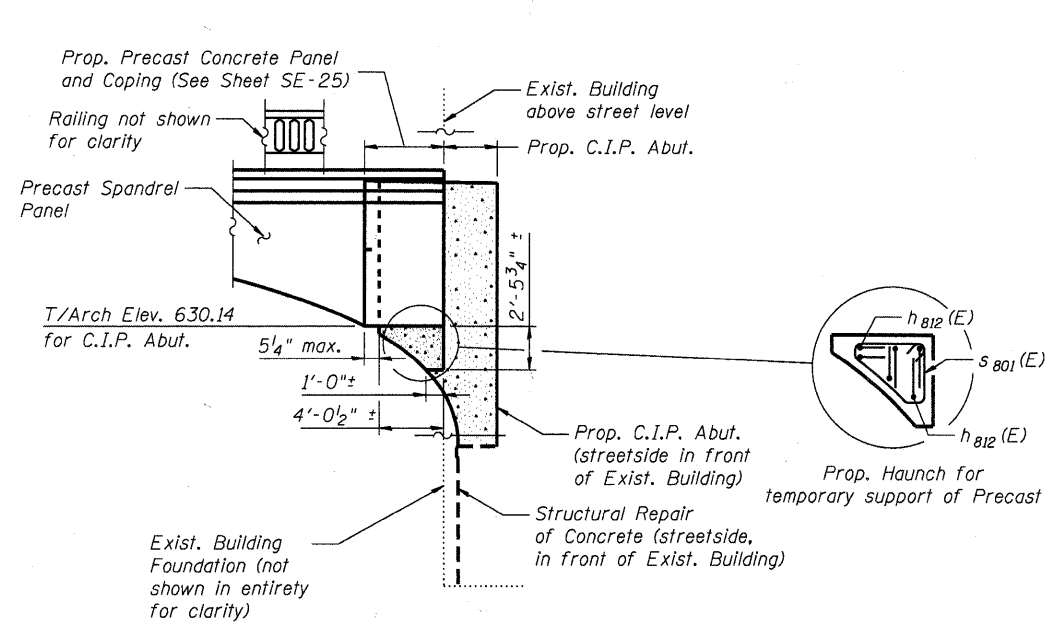
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| USER NAME = whood     | DESIGNED - JMW | REVISED - |
|                       | CHECKED - RGD  | REVISED - |
| PLOT SCALE = N.T.S.   | DRAWN - WJH    | REVISED - |
| PLOT DATE = 7/26/2011 | CHECKED -      | REVISED - |

**CITY OF AURORA  
DOWNER PLACE OVER THE EAST BRANCH  
OF THE FOX RIVER**

**NORTHEAST CORNER DETAILS  
STRUCTURE NO. 045-6005**

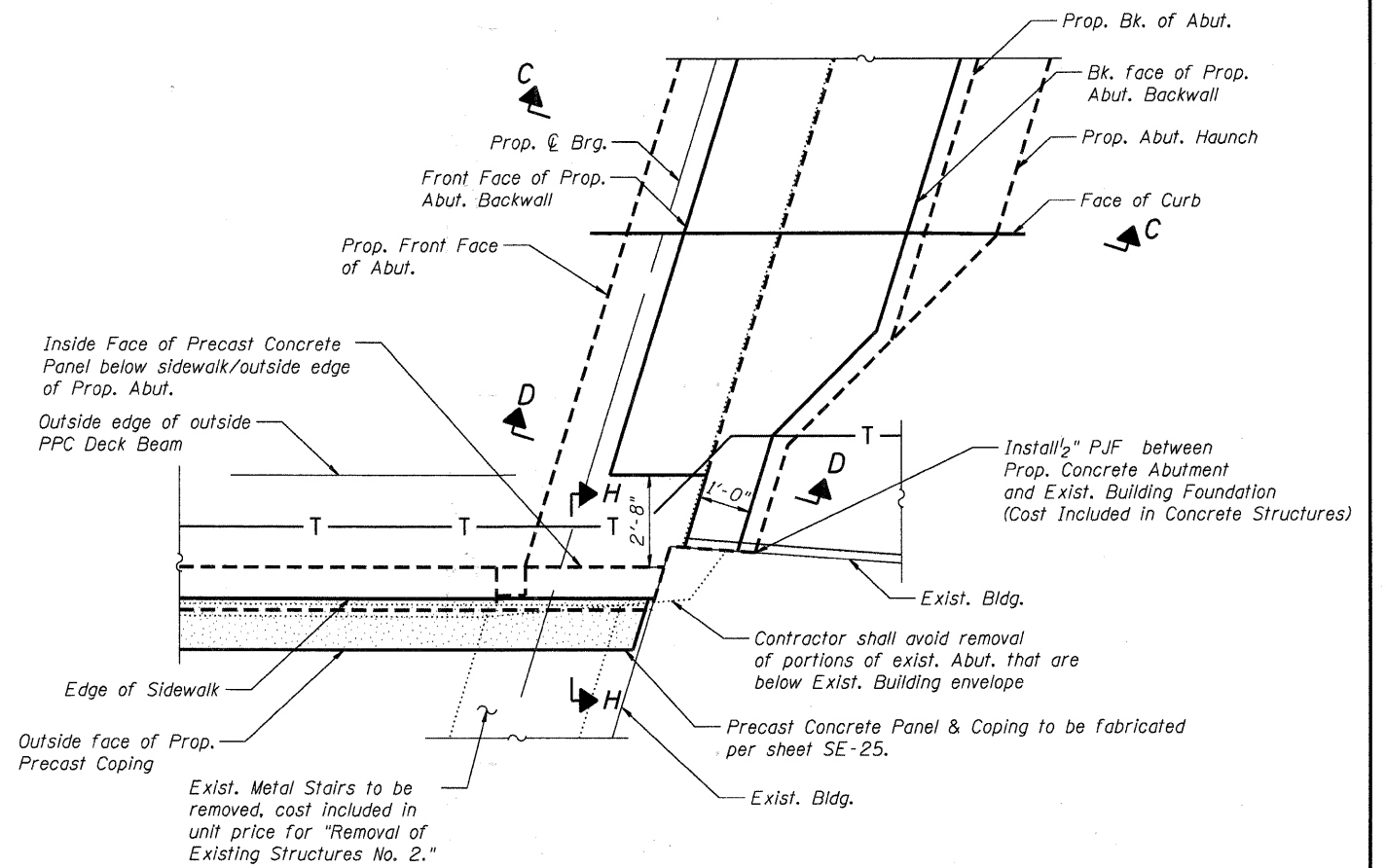
SHEET NO. SE-36 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---------------------------|----------------|--------|--------------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164                | 136       |
|                           |                |        | CONTRACT NO. 63620 |           |
| ILLINOIS FED. AID PROJECT |                |        |                    |           |



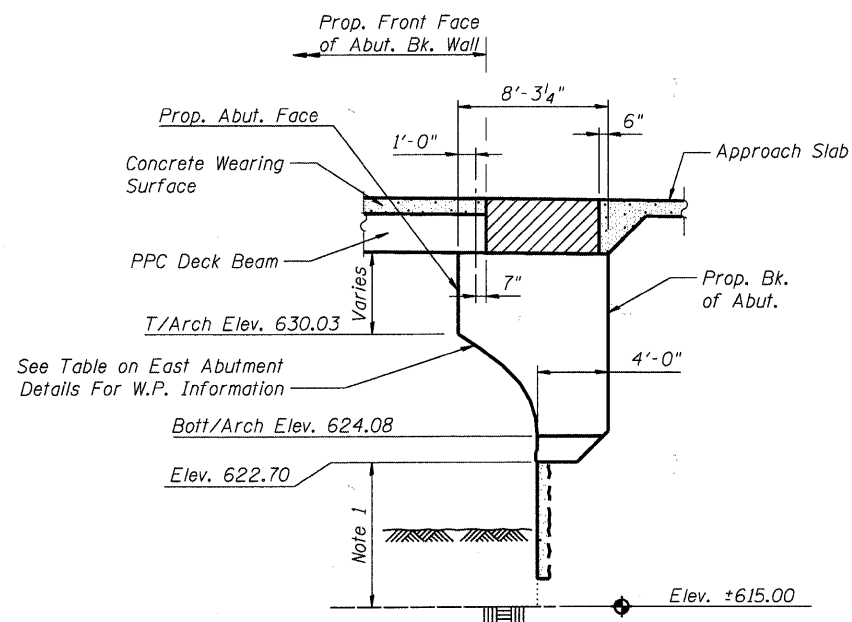
**ELEVATION AT S.E. CORNER OF EAST ABUTMENT**

Railing not shown for clarity



**PLAN - S.E. CORNER OF EAST ABUTMENT**

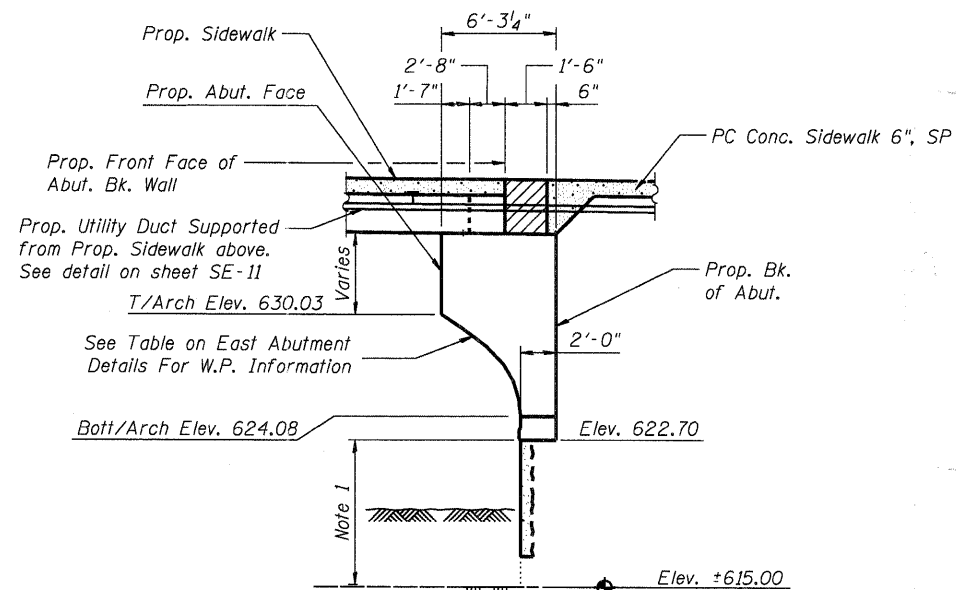
Railing not shown for clarity



**SECTION C-C THRU EAST ABUTMENT**

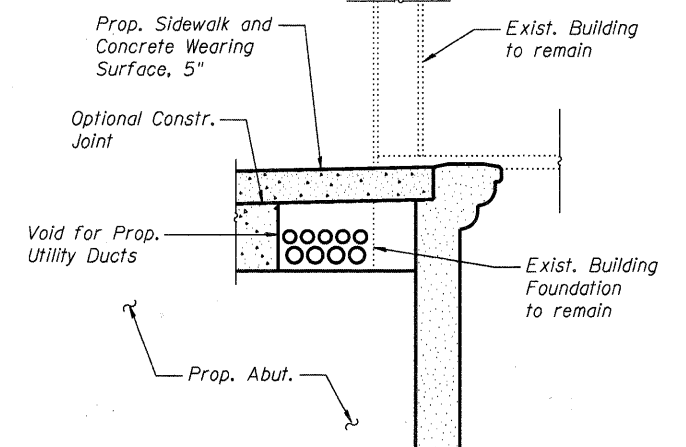
Horizontal Dimensions at Rt. L's

Abut. Backwall to be poured after all PPC Deck Beams, Concrete Wearing Surface and Approach Slab are installed.



**SECTION D-D THRU EAST ABUTMENT**

Horizontal Dimensions at Rt. L's



**SECTION H-H**

Notes:  
 1. Structural Repair of Concrete, see Sheet SE-6.

HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 10:06:25 AM  
 FILE NAME: 86090472-E-Ed15.ecadgn  
 PLOT DRIVER: pdf.plt  
 PEN TABLE: S:\Struct 22x34.tbl



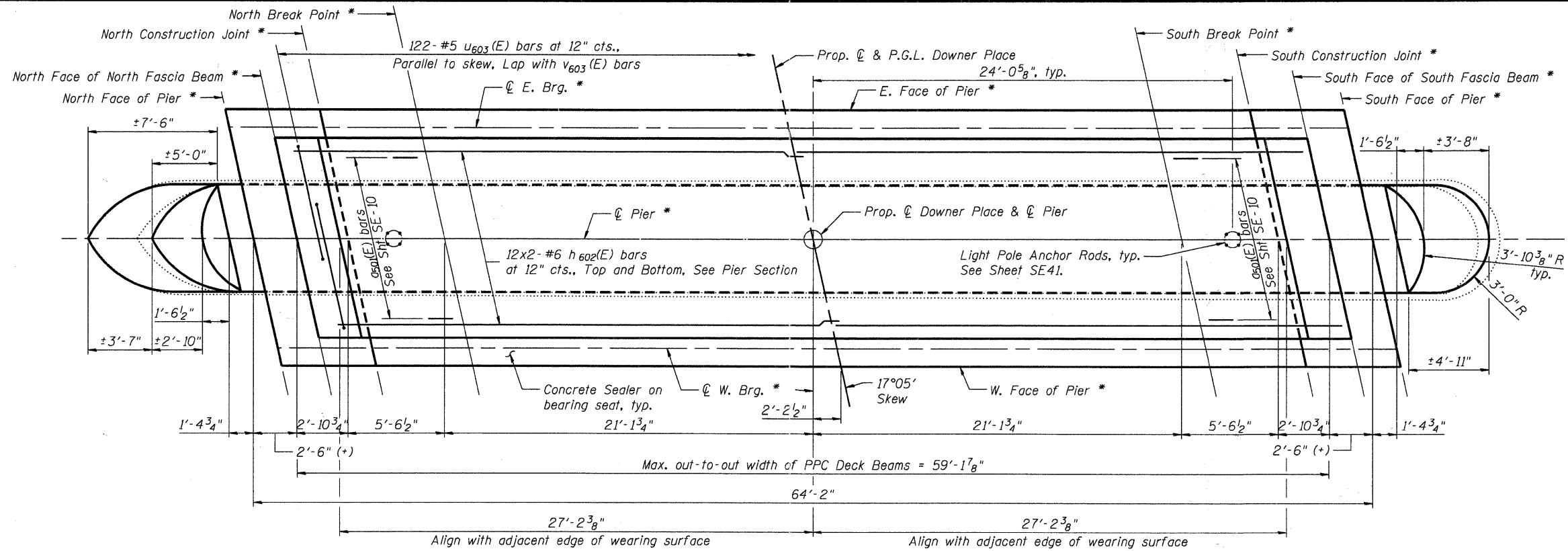
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| USER NAME = whood     | DESIGNED - JMW | REVISED - |
| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

**CITY OF AURORA**  
 DOWNER PLACE OVER THE EAST BRANCH  
 OF THE FOX RIVER

**SOUTHEAST CORNER DETAILS**  
 STRUCTURE NO. 045-6005

SHEET NO. SE-37 OF SE-45 SHEETS

| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|--------------------|----------------|--------|---------------------------|-----------|
|                    | 07-00264-00-BR | KANE   | 164                       | 137       |
| CONTRACT NO. 63620 |                |        | ILLINOIS FED. AID PROJECT |           |

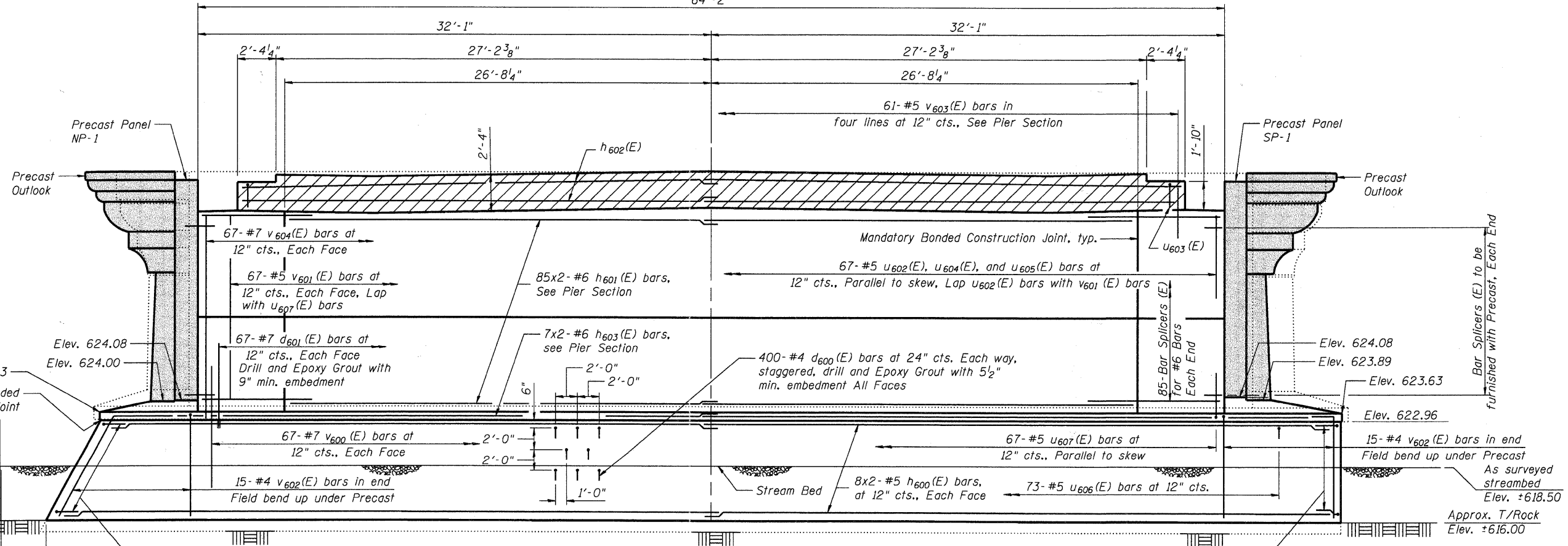


**MINIMUM BAR LAP**

|    |        |
|----|--------|
| #5 | 2'-11" |
| #6 | 3'-6"  |
| #7 | 4'-1"  |

\* See next sheet for Top of Pier Elevations.

**PLAN**



Notes:  
1. See next sheet for Pier Section and End View

COMPANY NAME: HRGreen  
PROJECT CONTACT: Michael G. Harding  
DATE PLOTTED: 7/26/2011 11:06:30 AM  
FILE NAME: 86090472-e-Pier1-01.dgn  
PLOT DRIVER: pdfplot  
PEN TABLE: Struct 22x34.tbl

**HRGreen.com**  
Illinois Professional Design Firm  
#194-001922

|                       |                |             |
|-----------------------|----------------|-------------|
| USER NAME = whoad     | DESIGNED - JMW | REVISOR -   |
| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISIONS - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISIONS - |
|                       | CHECKED -      | REVISIONS - |

**CITY OF AURORA  
DOWNER PLACE OVER THE EAST BRANCH  
OF THE FOX RIVER**

**PIER 1  
STRUCTURE NO. 045-6005**

SHEET NO. SE-38 OF SE-45 SHEETS

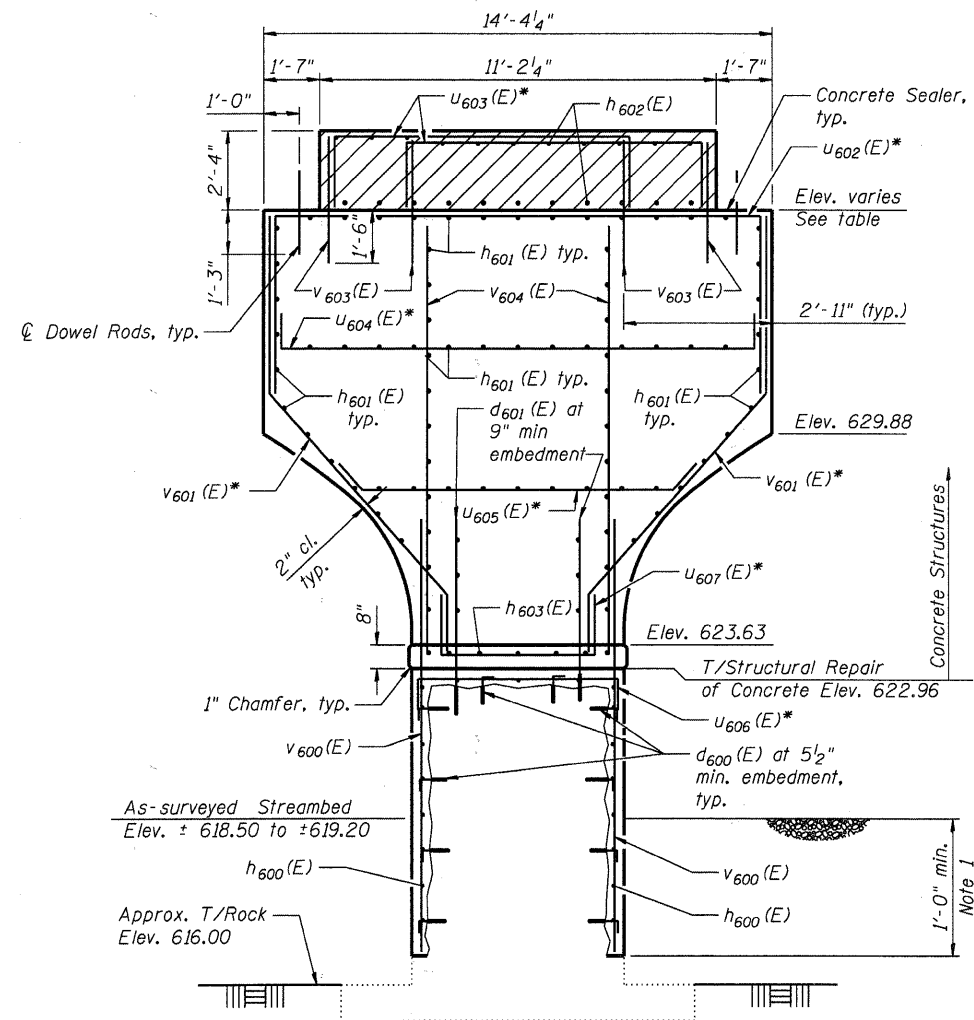
| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|--------------------|----------------|--------|---------------------------|-----------|
|                    | 07-00264-00-BR | KANE   | 164                       | 138       |
| CONTRACT NO. 63620 |                |        | ILLINOIS FED. AID PROJECT |           |

Top of Pier Elevations (See previous sheet for locations)

|                   | North Face of Pier 1 | North Fascia Beam | North Const. Joint | North Break Point | ☉ of Roadway | South Break Point | South Const. Joint | South Fascia Beam | South Face of Pier 1 |
|-------------------|----------------------|-------------------|--------------------|-------------------|--------------|-------------------|--------------------|-------------------|----------------------|
| W. Face of Pier 1 | 635.50               | 635.55            | 635.51             | 635.45            | 635.83       | 635.34            | 635.39             | 635.40            | 635.34               |
| W. Brg. Pier 1    | 635.51               | 635.56            | 635.52             | 635.46            | 635.84       | 635.35            | 635.40             | 635.41            | 635.35               |
| ☉ Pier 1          | 635.53               | 635.58            | 635.55             | 635.49            | 635.88       | 635.41            | 635.46             | 635.48            | 635.42               |
| E. Brg. Pier 1    | 635.54               | 635.59            | 635.56             | 635.51            | 635.91       | 635.46            | 635.51             | 635.53            | 635.47               |
| E. Face of Pier 1 | 635.54               | 635.59            | 635.56             | 635.51            | 635.92       | 635.47            | 635.52             | 635.54            | 635.48               |

**WP DIMENSIONS**

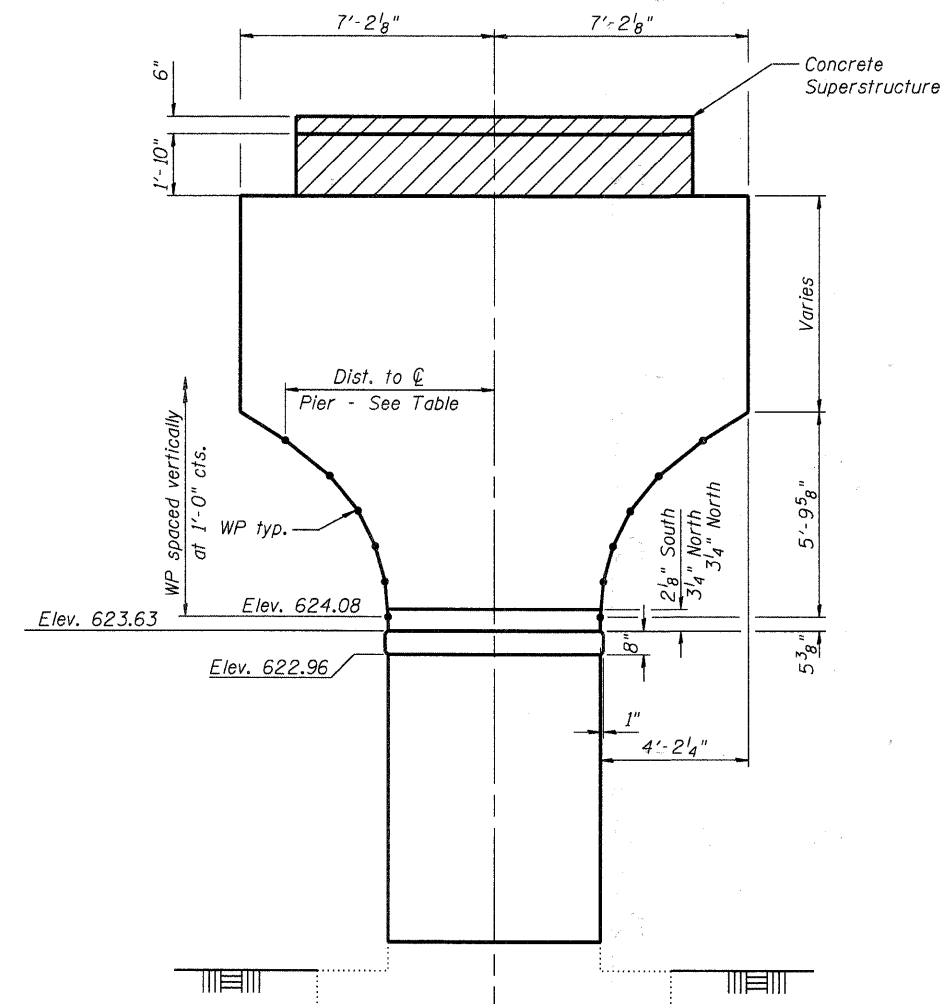
| WP Height from Elev. 624.08 | Dist from Pier ☉        |
|-----------------------------|-------------------------|
| 0'                          | 3'-0"                   |
| 1'-0"                       | 3'-1 $\frac{1}{16}$ "   |
| 2'-0"                       | 3'-10 $\frac{3}{16}$ "  |
| 3'-0"                       | 4'-7 $\frac{13}{16}$ "  |
| 4'-0"                       | 5'-10 $\frac{13}{16}$ " |
| 5'-0"                       | 7'-2 $\frac{1}{8}$ "    |



\*Bars placed parallel to skew.

**PIER SECTION**

Horizontal Dimensions at Rt L's



**END VIEW**

Horizontal Dimensions at Rt L's

Precast Concrete Outlook and Fascia Panel not shown for clarity.

Notes:  
1. Structural Repair of Concrete. See SE-5

COMPANY NAME: HRGreen  
PROJECT CONTACT: Nancy C. Harding  
CLIENT: City of Aurora  
DATE PLOTTED: 7/26/2011 11:06:16 AM  
FILE NAME: 86090412-e-Pier-1-02.dgn  
PLOT DRIVER: pdfplot  
PEN TABLE: Struct 22x34.tbl



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| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

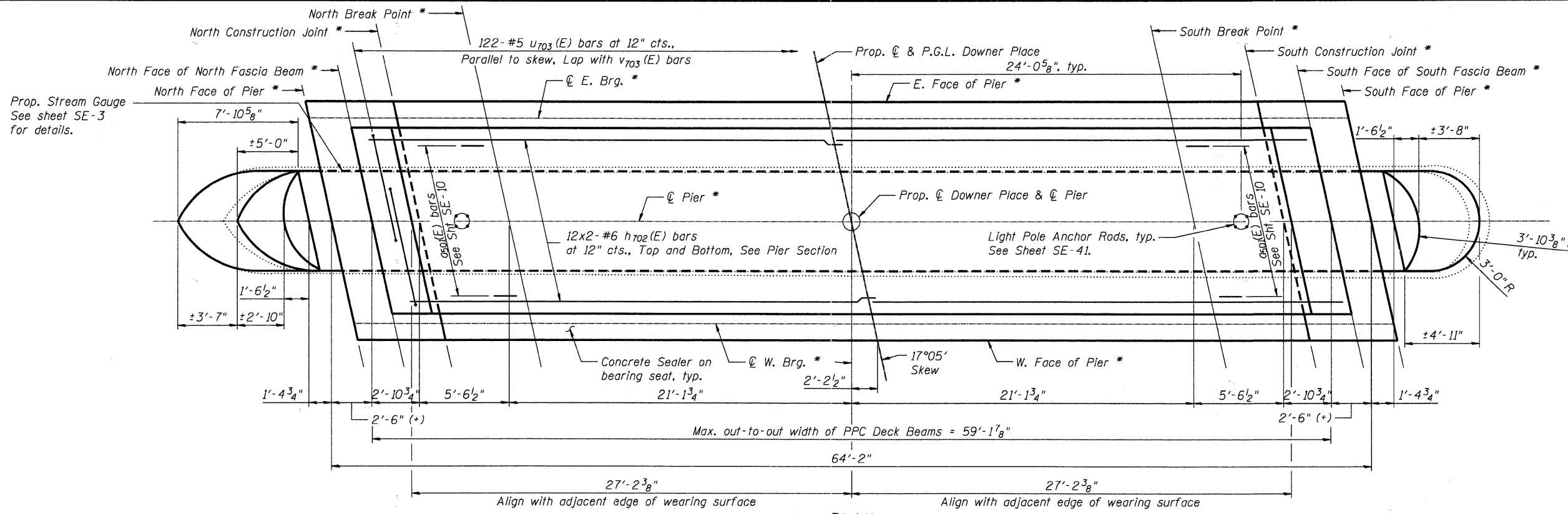
**PIER I**  
**STRUCTURE NO. 045-6005**

SHEET NO. SE-39 OF SE-45 SHEETS

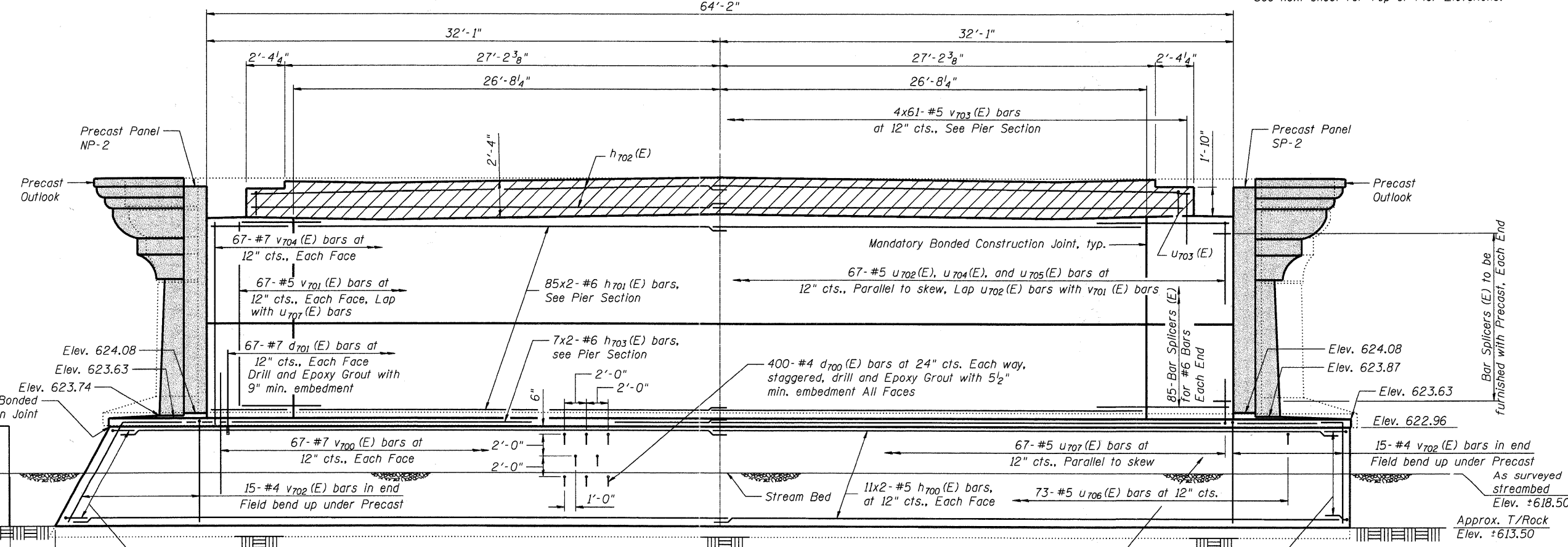
| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|--------------------|----------------|--------|---------------------------|-----------|
|                    | 07-00264-00-BR | KANE   | 164                       | 139       |
| CONTRACT NO. 63620 |                |        | ILLINOIS FED. AID PROJECT |           |

**MINIMUM BAR LAP**

|    |        |
|----|--------|
| #5 | 2'-11" |
| #6 | 3'-6"  |
| #7 | 4'-1"  |



\* See next sheet for Top of Pier Elevations.



Notes:  
1. See next sheet for Pier Section and End View

HRGreen.com  
184-001322

USER NAME = whood  
DESIGNED - JMW  
CHECKED - RGD  
PLOT SCALE = N.T.S.  
DRAWN - WJH  
PLOT DATE = 7/26/2011

REVISIONS  
REVISED -  
REVISED -  
REVISED -  
REVISED -

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**PIER II**  
**STRUCTURE NO. 045-6005**  
SHEET NO. SE-40 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|----------------|--------|--------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164          | 140       |
| CONTRACT NO. 63620        |                |        |              |           |
| ILLINOIS FED. AID PROJECT |                |        |              |           |

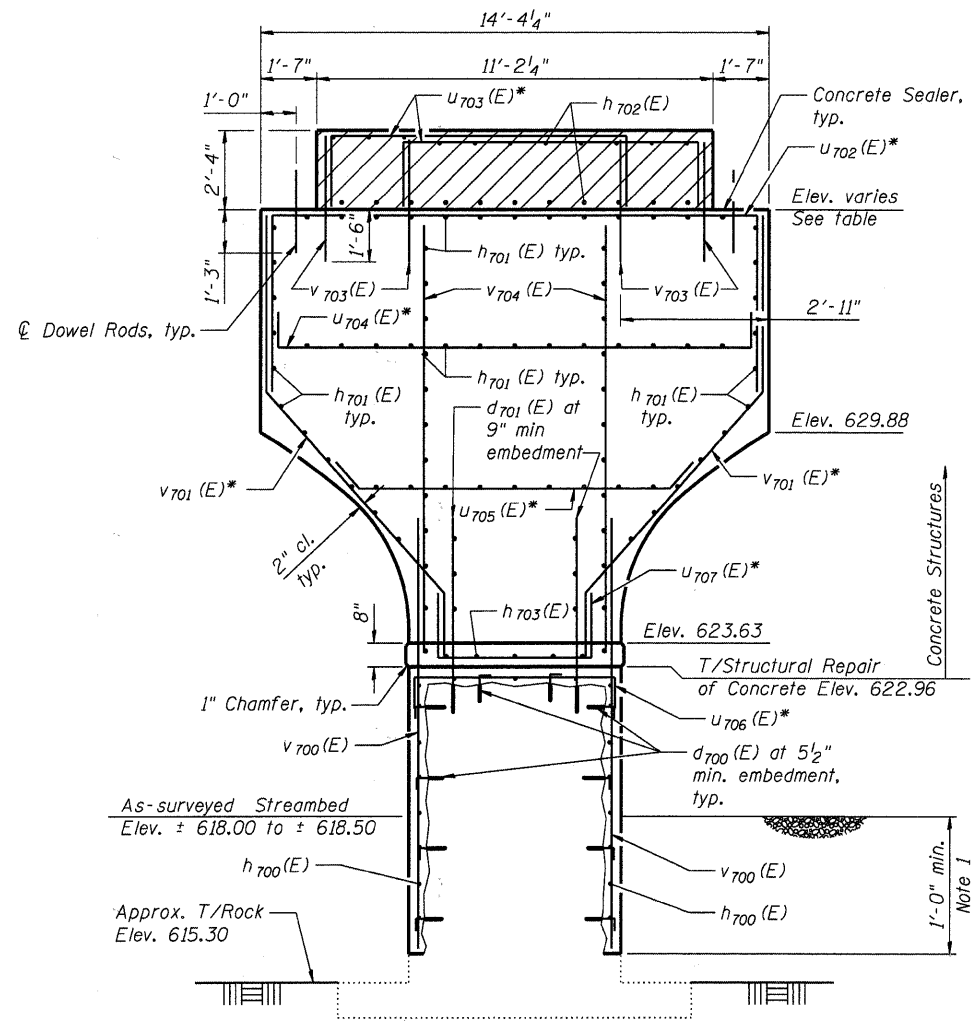


Top of Pier Elevations (See previous sheet for locations)

|                   | North Face of Pier 1 | North Fascia Beam | North Const. Joint | North Break Point | ℄ of Roadway | South Break Point | South Const. Joint | South Fascia Beam | South Face of Pier 1 |
|-------------------|----------------------|-------------------|--------------------|-------------------|--------------|-------------------|--------------------|-------------------|----------------------|
| W. Face of Pier 2 | 635.32               | 635.38            | 635.36             | 635.31            | 635.78       | 635.40            | 635.46             | 635.50            | 635.45               |
| W. Brg. Pier 2    | 635.32               | 635.37            | 635.35             | 635.30            | 635.77       | 635.39            | 635.45             | 635.49            | 635.45               |
| ℄ Pier 2          | 635.27               | 635.33            | 635.31             | 635.26            | 635.72       | 635.35            | 635.41             | 635.45            | 635.40               |
| E. Brg. Pier 2    | 635.23               | 635.28            | 635.26             | 635.21            | 635.68       | 635.30            | 635.37             | 635.40            | 635.36               |
| E. Face of Pier 2 | 635.22               | 635.28            | 635.26             | 635.21            | 635.67       | 635.30            | 635.36             | 635.40            | 635.35               |

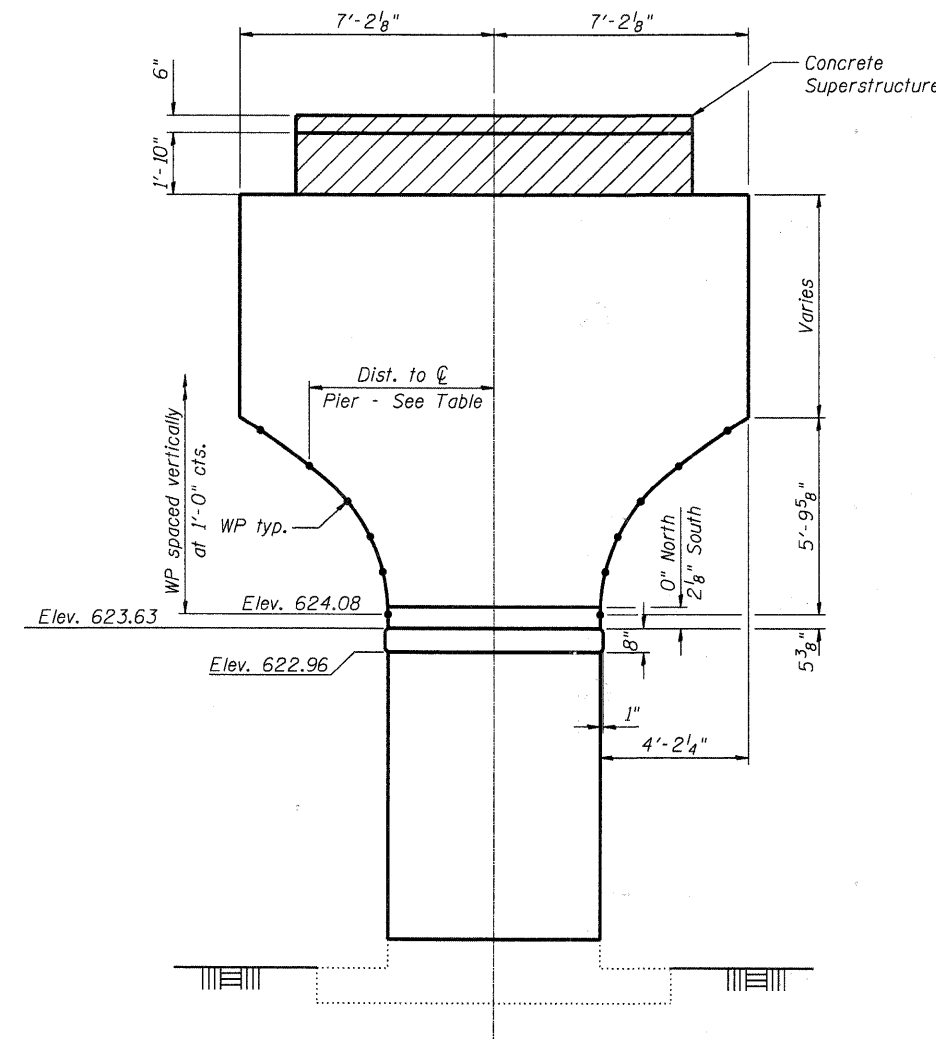
**WP DIMENSIONS**

| WP Height from Elev. 624.08 | Dist from Pier ℄                      |
|-----------------------------|---------------------------------------|
| 0'                          | 3'-0"                                 |
| 1'-0"                       | 3'-1 <sup>1</sup> / <sub>16</sub> "   |
| 2'-0"                       | 3'-10 <sup>3</sup> / <sub>16</sub> "  |
| 3'-0"                       | 4'-7 <sup>13</sup> / <sub>16</sub> "  |
| 4'-0"                       | 5'-10 <sup>13</sup> / <sub>16</sub> " |
| 5'-0"                       | 7'-2 <sup>1</sup> / <sub>8</sub> "    |



**PIER SECTION**

Horizontal Dimensions at Rt L's



**END VIEW**

Horizontal Dimensions at Rt L's  
Precast Concrete Outlook and Fascia  
Panel not shown for clarity.

Notes:  
1. Structural Repair of Concrete, See SE-5

COMPANY NAME: HRGreen  
PROJECT CONTACT: Michael G. Harshbarger  
CLIENT: City of Aurora  
DATE PLOTTED: 7/26/2011 11:06:41 AM  
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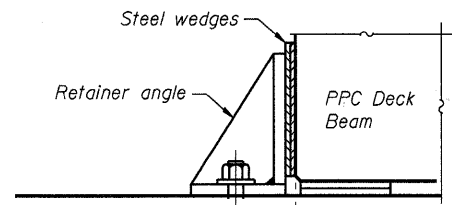
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| PLOT DATE = 7/26/2011 | CHECKED -      | REVISED - |

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**PIER II**  
**STRUCTURE NO. 045-6005**

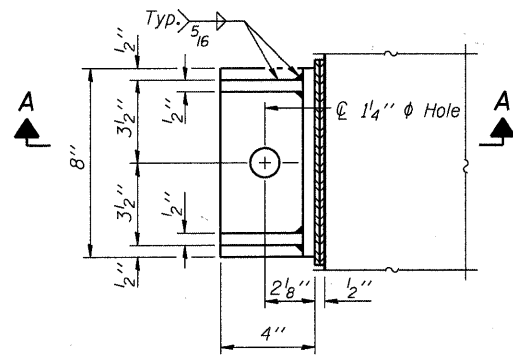
SHEET NO. SE-41 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---------------------------|----------------|--------|--------------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164                | 141       |
|                           |                |        | CONTRACT NO. 63620 |           |
| ILLINOIS FED. AID PROJECT |                |        |                    |           |



1"  $\phi$  x 12" anchor bolt with 2 1/2" x 2 1/2" x 5/16" L washer under nut. Holes in cap to be drilled after beams are in place.

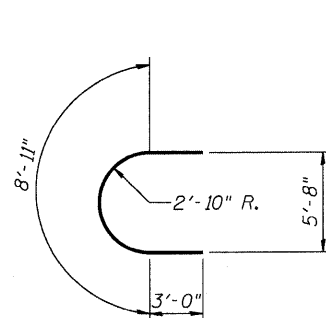
**SECTION A-A**



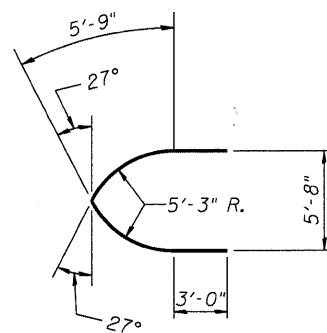
**PLAN**

**Notes:**

Cost of retainer and accessories are included with Precast Prestressed Concrete Deck Beams. Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. The side retainers shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM 385. Anchor bolts and plate washers shall be galvanized according to AASHTO M 232. After the notch or concrete overlay are poured and cured, the steel wedges shall be removed.



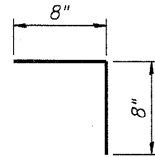
**BAR U600(E) & U700(E)**



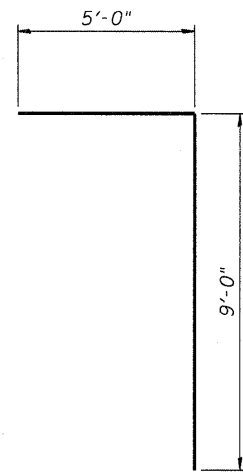
**BAR U601(E) & U701(E)**

|  |                   |        |                   |       |
|--|-------------------|--------|-------------------|-------|
|  | U602(E) & U702(E) | 14'-6" | U602(E) & U702(E) | 3'-6" |
|  | U603(E) & U703(E) | 9'-8"  | U603(E) & U703(E) | 1'-8" |
|  | U604(E) & U704(E) | 14'-2" | U604(E) & U704(E) | 1'-4" |
|  | U606(E) & U706(E) | 5'-10" | U606(E) & U706(E) | 1'-0" |
|  | U607(E) & U707(E) | 4'-5"  | U607(E) & U707(E) | 1'-4" |

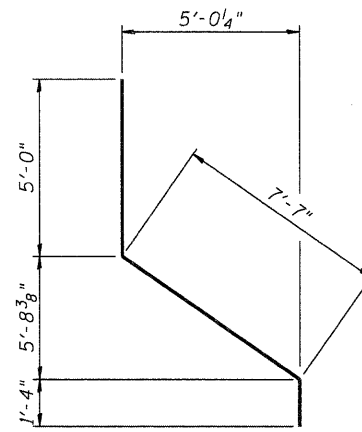
**BAR U602(E), U603(E), U604(E), U606(E), U607(E), U702(E), U703(E), U704(E), U706(E) & U707(E),**



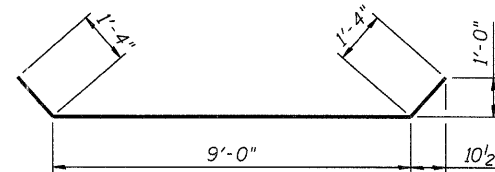
**BAR d600(E) & d700(E)**



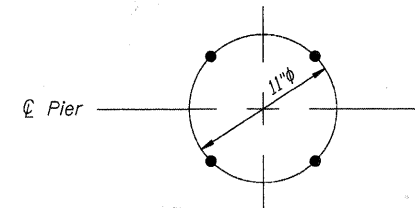
**BAR v602(E) & v702(E)**



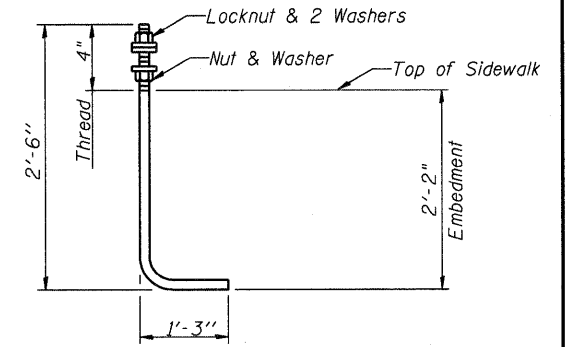
**BAR v601(E) & v701(E)**



**BAR U605(E) & U705(E)**



**LIGHT POLE BOLT CIRCLE**



**ANCHOR ROD**

3/4" Diameter, Galvanized (ASTM F 1554 Grade 105). See Lighting Plan for installation details. Cost included with Ornamental Light Unit, Complete

**PIER 1 BILL OF MATERIAL**

| Bar                              | No. | Size    | Length  | Shape |
|----------------------------------|-----|---------|---------|-------|
| d600 (E)                         | 400 | #4      | 1'-4"   | └     |
| d601 (E)                         | 134 | #7      | 4'-0"   | —     |
| v600 (E)                         | 32  | #5      | 42'-0"  | —     |
| v601 (E)                         | 170 | #6      | 28'-5"  | —     |
| v602 (E)                         | 24  | #6      | 31'-3"  | —     |
| v603 (E)                         | 14  | #6      | 42'-0"  | —     |
| U600 (E)                         | 8   | #4      | 14'-11" | C     |
| U601 (E)                         | 10  | #4      | 17'-6"  | C     |
| U602 (E)                         | 67  | #5      | 21'-6"  | ┌     |
| U603 (E)                         | 122 | #5      | 13'-0"  | ┌     |
| U604 (E)                         | 67  | #5      | 16'-10" | ┌     |
| U605 (E)                         | 67  | #5      | 11'-8"  | ┌     |
| U606 (E)                         | 73  | #5      | 7'-10"  | ┌     |
| U607 (E)                         | 67  | #5      | 7'-1"   | ┌     |
| V600 (E)                         | 134 | #7      | 13'-0"  | —     |
| V601 (E)                         | 134 | #5      | 13'-11" | └     |
| V602 (E)                         | 30  | #4      | 11'-0"  | └     |
| V603 (E)                         | 244 | #5      | 3'-6"   | —     |
| V604 (E)                         | 134 | #7      | 12'-2"  | —     |
| Cofferdam Excavation             |     | Cu. Yd. | 120.0   |       |
| Cofferdam (Location - 5)         |     | Each    | 1       |       |
| Concrete Structures              |     | Cu. Yd. | 341.3   |       |
| Concrete Superstructure          |     | Cu. Yd. | 56.1    |       |
| Reinforcement Bars, Epoxy Coated |     | Pound   | 28,510  |       |
| Bar Splicers                     |     | Each    | 170     |       |
| Concrete Sealer                  |     | Sq. Ft. | 204     |       |

**PIER 2 BILL OF MATERIAL**

| Bar                              | No. | Size    | Length  | Shape |
|----------------------------------|-----|---------|---------|-------|
| d700 (E)                         | 400 | #4      | 1'-4"   | └     |
| d701 (E)                         | 134 | #7      | 4'-0"   | —     |
| v700 (E)                         | 32  | #5      | 42'-0"  | —     |
| v701 (E)                         | 170 | #6      | 28'-5"  | —     |
| v702 (E)                         | 24  | #6      | 31'-3"  | —     |
| v703 (E)                         | 14  | #6      | 42'-0"  | —     |
| U700 (E)                         | 8   | #4      | 14'-11" | C     |
| U701 (E)                         | 10  | #4      | 17'-6"  | C     |
| U702 (E)                         | 67  | #5      | 21'-6"  | ┌     |
| U703 (E)                         | 122 | #5      | 13'-0"  | ┌     |
| U704 (E)                         | 67  | #5      | 16'-10" | ┌     |
| U705 (E)                         | 67  | #5      | 11'-8"  | ┌     |
| U706 (E)                         | 73  | #5      | 7'-10"  | ┌     |
| U707 (E)                         | 67  | #5      | 7'-1"   | ┌     |
| V700 (E)                         | 134 | #7      | 13'-0"  | —     |
| V701 (E)                         | 134 | #5      | 13'-11" | └     |
| V702 (E)                         | 30  | #4      | 11'-0"  | └     |
| V703 (E)                         | 244 | #5      | 3'-6"   | —     |
| V704 (E)                         | 134 | #7      | 12'-2"  | —     |
| Cofferdam Excavation             |     | Cu. Yd. | 120     |       |
| Cofferdam (Location - 6)         |     | Each    | 0.5     |       |
| Concrete Structures              |     | Cu. Yd. | 341.3   |       |
| Concrete Superstructure          |     | Cu. Yd. | 56.1    |       |
| Reinforcement Bars, Epoxy Coated |     | Pound   | 28,510  |       |
| Bar Splicers                     |     | Each    | 170     |       |
| Concrete Sealer                  |     | Sq. Ft. | 204     |       |

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1726/2011 110650 AM  
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5Struct 22-34.tbl



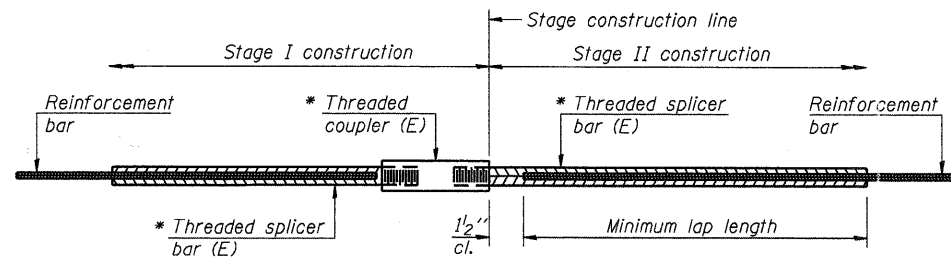
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| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

**CITY OF AURORA  
DOWNER PLACE OVER THE EAST BRANCH  
OF THE FOX RIVER**

**PIER DETAILS  
STRUCTURE NO. 045-6005**

SHEET NO. SE-42 OF SE-45 SHEETS

| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|--------------------|----------------|--------|---------------------------|-----------|
|                    | 07-00264-00-BR | KANE   | 164                       | 142       |
| CONTRACT NO. 63620 |                |        | ILLINOIS FED. AID PROJECT |           |



**STANDARD BAR SPLICER ASSEMBLY**

| Minimum Lap Lengths (U.N.O.) |         |         |         |         |         |
|------------------------------|---------|---------|---------|---------|---------|
| Bar size to be spliced       | Table 1 | Table 2 | Table 3 | Table 4 | Table 5 |
| 3, 4                         | 1'-5"   | 1'-11"  | 2'-1"   | 2'-4"   | 2'-3"   |
| 5                            | 1'-9"   | 2'-5"   | 2'-7"   | 2'-11"  | 2'-10"  |
| 6                            | 2'-1"   | 2'-11"  | 3'-1"   | 3'-6"   | 3'-4"   |
| 7                            | 2'-9"   | 3'-10"  | 4'-2"   | 4'-8"   | 4'-6"   |
| 8                            | 3'-8"   | 5'-1"   | 5'-5"   | 6'-2"   | 5'-10"  |
| 9                            | 4'-7"   | 6'-5"   | 6'-10"  | 7'-9"   | 7'-5"   |

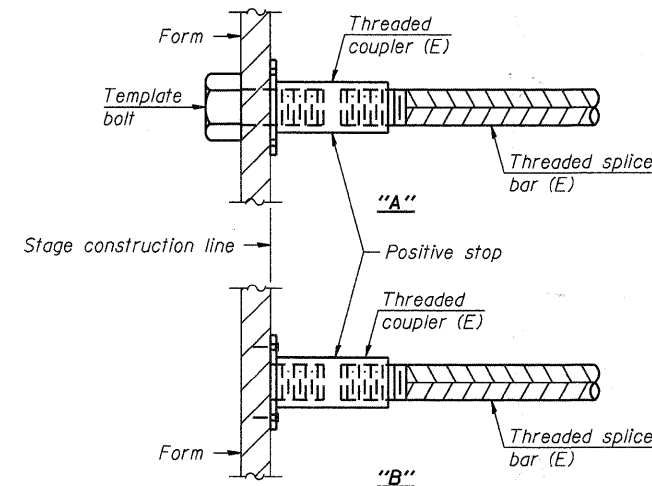
- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1/2" + thread length

\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

| Location              | Bar size | No. assemblies required | Table for minimum lap length ** |
|-----------------------|----------|-------------------------|---------------------------------|
| East Abutment         | #5       | 21                      | 4                               |
| East Abutment         | #7       | 30                      | 4, (6'-7")                      |
| West Abutment         | #5       | 38                      | 4                               |
| West Abutment         | #7       | 24                      | 4, (6'-7")                      |
| Pier 1                | #6       | 184                     | 4, (5'-4")                      |
| Pier 2                | #6       | 184                     | 4, (5'-4")                      |
| Conc. Wearing Surface | #4       | 258                     | 3                               |

\*\* Lengths provided in ( ) are for threaded splicer bar lengths to be used in closure pours.



**INSTALLATION AND SETTING METHODS**

- "A": Set bar splicer assembly by means of a template bolt.
- "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
- (E): Indicates epoxy coating.

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See special provision for Mechanical Splicers.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Herding  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 10:06:57 AM  
 FILE NAME: 86000472-E-Bar.dgn  
 PLOT DRIVER: pdfLdt  
 PEN TABLE: Struct 22x34.tbl



|                       |                |           |
|-----------------------|----------------|-----------|
| USER NAME = whood     | DESIGNED - MGH | REVISED - |
|                       | CHECKED - RGD  | REVISED - |
| PLOT SCALE = N.T.S.   | DRAWN - WJH    | REVISED - |
| PLOT DATE = 7/26/2011 | CHECKED -      | REVISED - |

**CITY OF AURORA**  
**DOWNER PLACE OVER THE WEST BRANCH**  
**OF THE FOX RIVER**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS**  
**STRUCTURE NO. 045-6005**

SHEET NO. SE-43 OF SE-45 SHEETS

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---------------------------|----------------|--------|--------------------|-----------|
|                           | 07-00264-00-BR | KANE   | 164                | 143       |
|                           |                |        | CONTRACT NO. 63620 |           |
| ILLINOIS FED. AID PROJECT |                |        |                    |           |



SOIL BORING LOG

Page 1 of 1

ROUTE Downers Place Bridge DESCRIPTION Thru East Arch near East Abutment of East Bridge LOCATION 9' S of N curb & 8' W of E Abutment

Table with columns for Depth (ft), Soil Description, and SPT (blows/ft). Includes data for Surface Water Elev., Stream Bed Elev., Groundwater Elev., and various soil layers like ASPHALT PAVEMENT, OLD BRICK PAVEMENT, and Limestone.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-D) Dilge, (S) Shear, (P) Penetration, (R) Rupture. The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586).



SOIL BORING LOG

Page 1 of 1

ROUTE Downers Place Bridge DESCRIPTION Thru East Arch near East Pier of East Bridge LOCATION 9' N of S curb & 12' W of East Pier

Table with columns for Depth (ft), Soil Description, and SPT (blows/ft). Includes data for Surface Water Elev., Stream Bed Elev., Groundwater Elev., and various soil layers like ASPHALT PAVEMENT, OLD BRICK PAVEMENT, and Limestone.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-D) Dilge, (S) Shear, (P) Penetration, (R) Rupture. The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586).



SOIL BORING LOG

Page 1 of 1

ROUTE Downers Place Bridge DESCRIPTION Thru West Arch near West Pier of East Bridge LOCATION 10' W of W pier & 11' S of N curb

Table with columns for Depth (ft), Soil Description, and SPT (blows/ft). Includes data for Surface Water Elev., Stream Bed Elev., Groundwater Elev., and various soil layers like ASPHALT PAVEMENT, OLD BRICK PAVEMENT, and Limestone.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-D) Dilge, (S) Shear, (P) Penetration, (R) Rupture. The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586).

HRGreen, Michael G. Harding, City of Aurora, 7/26/2011 11:07:00 AM, 8609047-E-SR01.dgn

HRGreen logo and company information: HRGreen.com, Illinois Professional Design Firm # 104-001522

Table with columns: USER NAME, DESIGNED, CHECKED, PLOT SCALE, PLOT DATE, DRAWN, CHECKED, REVISED.

CITY OF AURORA, DOWNER PLACE OVER THE EAST BRANCH OF THE FOX RIVER

BORING LOGS, STRUCTURE NO. 045-6005, SHEET NO. SE-44 OF SE-45 SHEETS

Table with columns: F.A. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO.



### SOIL BORING LOG

Page 1 of 1

ROUTE Downer Place Bridge DESCRIPTION Outside the bridge 30' west of west abutment of East Bridge LOGGED BY Rahman

SECTION 281 T38N R8E LOCATION 6' north of south curb & 30' west of west abutment

COUNTY Kane County, Illinois DRILLING METHOD Hollow Stem Auger HAMMER TYPE Ashtons

| STRUCT. NO. | STATION | DEPTH (ft) | SOIL TYPE  | SPT (blows) | REMARKS | SURFACE WATER ELEV. (ft) | STREAM BED ELEV. (ft) | GROUNDWATER ELEV. (ft) | FIRST ENCOUNTER UPON COMPLETION (ft) | AFTER (ft) | D | E | L | O | S | M | U | C | O | I | S |      |
|-------------|---------|------------|--|-------------|---------|--------------------------|-----------------------|------------------------|--------------------------------------|------------|---|---|---|---|---|---|---|---|---|---|---|------|
|             |         |            |  |             |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   | (ft) |
|             |         |            | ASPHALT PAVEMENT - 6" thick  |             |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |
|             |         |            | 2" Brick Pavement - 4" thick   |             |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |
|             |         |            | Fill made with Brown & Black CLAY, med un: stiff to soil   |             |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |
|             |         |            |  |             |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |
|             |         |            | Brown SILTY CLAY with traces of sand and gravel; moist to very moist; medium stiff to soft; (CL) - (A-6-7) |             |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |
|             |         |            |  |             |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |
|             |         |            | black CLAY with trace of organic matter; very moist to wet; soft; (CL) - (A-2-7)                           |             |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |
|             |         |            |  |             |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |
|             |         |            | Brown SAND & GRAVEL; loose to medium dense; unsorted; (SC) - (A-1)   |             |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |
|             |         |            |  |             |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) DDD, from 137 (Rev. 6-99)



### SOIL BORING LOG

Page 1 of 1

ROUTE Downer Place Bridge DESCRIPTION Through middle of West Arch LOGGED BY Rahman

SECTION 281 T38N R8E LOCATION 4' north of curb & 24' W of West pier

COUNTY Kane County, Illinois DRILLING METHOD Core HAMMER TYPE N/A

| STRUCT. NO. | STATION | DEPTH (ft) | SOIL TYPE                             | REMARKS | SURFACE WATER ELEV. (ft) | STREAM BED ELEV. (ft) | GROUNDWATER ELEV. (ft) | FIRST ENCOUNTER UPON COMPLETION (ft) | AFTER (ft) | D | E | L | O | S | M | U | C | O | I | S |      |
|-------------|---------|------------|---------------------------------------|---------|--------------------------|-----------------------|------------------------|--------------------------------------|------------|---|---|---|---|---|---|---|---|---|---|---|------|
|             |         |            |                                       |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   | (ft) |
|             |         |            | 3.5 inches of ASPHALT PAVEMENT        |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |
|             |         |            | 2" BRICK PAVEMENT - 4" thick          |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |
|             |         |            | Brown SAND & GRAVEL FILL              |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |
|             |         |            | CONCRETE - 18" Bridge Arch - 18" deep |         |                          |                       |                        |                                      |            |   |   |   |   |   |   |   |   |   |   |   |      |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 6-99)

COMPANY NAME: HRGreen  
PROJECT CONTACT: Michael G. Harding  
CLIENT: City of Aurora  
DATE PLOTTED: 7/26/2011 11:07:02 AM  
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PLOT DRIVER: pdfplot  
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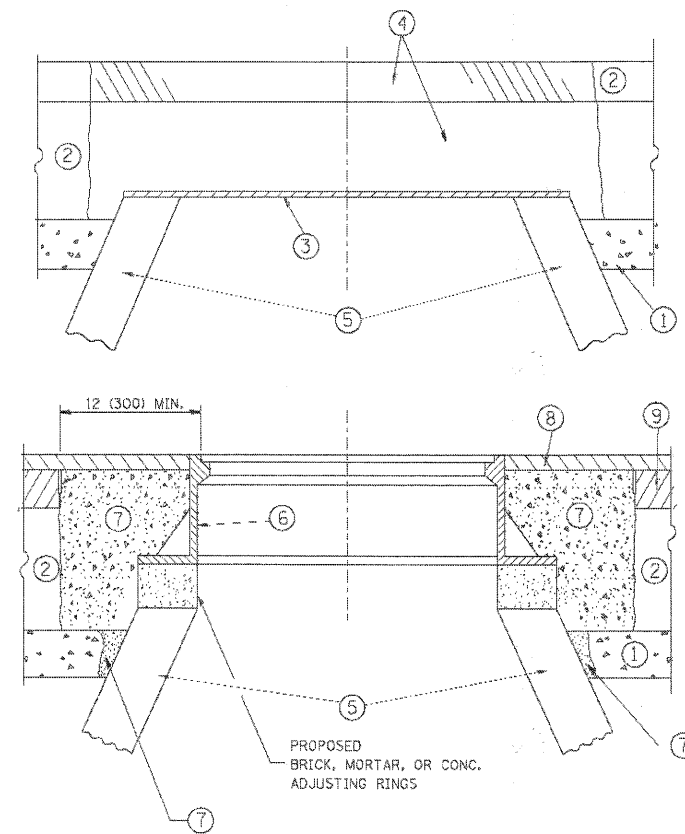


|                       |                |           |
|-----------------------|----------------|-----------|
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| PLOT SCALE = N.T.S.   | CHECKED - RGD  | REVISED - |
| PLOT DATE = 7/26/2011 | DRAWN - WJH    | REVISED - |
|                       | CHECKED -      | REVISED - |

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

**BORING LOGS**  
**STRUCTURE NO. 045-6005**  
SHEET NO. SE-45 OF SE-45 SHEETS

| F.A. RTE.          | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|--------------------|----------------|--------|---------------------------|-----------|
|                    | 07-00264-00-BR | KANE   | 164                       | 145       |
| CONTRACT NO. 63620 |                |        | ILLINOIS FED. AID PROJECT |           |



**CONSTRUCTION PROCEDURES**

- STAGE 1 (BEFORE PAVEMENT MILLING)**
- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
  - B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
  - C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
  - D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

- STAGE 2 (AFTER PAVEMENT MILLING)**
- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
  - B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
  - C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1\* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.
- \* UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

**LEGEND**

- ① SUB-BASE GRANULAR MATERIAL
- ② EXISTING PAVEMENT
- ③ 36 (900) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS PP-1\* CONCRETE
- ⑧ PROPOSED HMA SURFACE COURSE
- ⑨ PROPOSED HMA BINDER COURSE

**LOCATION OF STRUCTURES:**

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

**BASIS OF PAYMENT:** THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL" NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

**NOTES:**

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

**DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING**

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

COMPANY NAME: HARGREAVES  
 PROJECT CONTACT: G. Harding  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:07:03 AM  
 FILE NAME: 86090412-0a101.dgn  
 PLOT DRIVER: pdf.plt  
 STRUCT: 22x34.tbl

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| FILE NAME                                  | USER NAME | DESIGNED   | REVISED                |
| ct:\pwork\p\86090412\0a101\00315\0a101.dgn | logan     | - R. SHAH  | - A. ABBAS 03-21-97    |
|  |           | DRAWN      | REVISED                |
|  |           | -          | - R. WIEDEMAN 05-14-04 |
| PLOT SCALE                                 |           | CHECKED    | REVISED                |
| 45.0000 1/4 IN.                            |           | -          | - R. BORO 01-01-07     |
| PLOT DATE                                  |           | DATE       | REVISED                |
| 3/10/2011                                  |           | - 10-25-94 | - R. BORO 03-09-11     |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DETAILS FOR  
FRAMES AND LIDS ADJUSTMENT WITH MILLING**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

|   |                |                    |              |           |
|---|----------------|--------------------|--------------|-----------|
| F.A. RTE.                                       | SECTION        | COUNTY             | TOTAL SHEETS | SHEET NO. |
|   | 07-00264-00-BR | KANE               | 164          | 146       |
| BD600-03 (BD-8)                                 |                | CONTRACT NO. 63620 |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                |                    |              |           |

VARIABLE - TO MEET EXISTING DIMENSIONS AND FIELD CONDITIONS (SEE NOTE ②)

PROP. CONC. CURB OR CURB AND GUTTER REPLACEMENT IN ACCORDANCE WITH STATE STANDARD 606001. (SEE NOTE ②)

EXISTING OR PROPOSED HMA SURFACE (IF APPLICABLE)

SEE STATE STANDARD 606001

1/4" (5) \*\*

1/2" \*

3" (75) MIN.

EXISTING CONCRETE PAVEMENT, CONCRETE BASE COURSE OR FLEXIBLE PAVEMENT

CONTRACTOR TO PROTECT EXISTING BRICK PAVERS AND SIDEWALK. ANY DAMAGE TO THE BRICK PAVERS AND SIDEWALK SHALL BE RECONSTRUCTED TO THE APPROVAL OF THE ENGINEER. THIS WORK SHALL NOT BE PAID FOR SEPERATLY BUT SHALL INCLUDED IN THE COST OF COMBINATION CURB AND GUTTER REMOVAL AND COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12.

PROPOSED 3/4" (20) PREFORMED EXPANSION JOINT AT CONCRETE SIDEWALKS, DRIVEWAYS, AND MEDIANS. (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.)

\* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

\*\* IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

NOTE: ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY. SODDING, SALT TOLERANT AND TOP SOIL, FURNISH AND PLACE 4" WILL BE PAID FOR SEPARATELY,

② FERTILIZER FOR THE PLACEMENT OF THE SOD IS NOT REQUIRED

③ CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.

④ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.

⑤ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

⑥ THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE COMBINATION CURB AND GUTTER REMOVAL AND COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12.

⑦ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.

⑧ THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE, GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.

REMOVAL AND REPLACEMENT 4" (100) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

REMOVAL AND REPLACEMENT IN EXCESS OF 4" (100) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

PROPOSED #6 (20) EPOXY COATED TIE BARS 24" (600) LONG AT 24" (600) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USUABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

BASIS OF PAYMENT:

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "COMBINATION CURB AND GUTTER REMOVAL" AND "COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12"

# COMBINATION CURB AND GUTTER REMOVAL AND COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

COMPANY NAME: HIGBEE  
PROJECT CONTACT: Michael C. Harding  
CLIENT: City of Aurora  
DATE PLOTTED: 7/26/2011 11:07:08 AM  
FILE NAME: 86090412-bd102.dgn  
PLOT DRIVER: pdfplot  
PEN TABLE: Struct 22-34.tbl

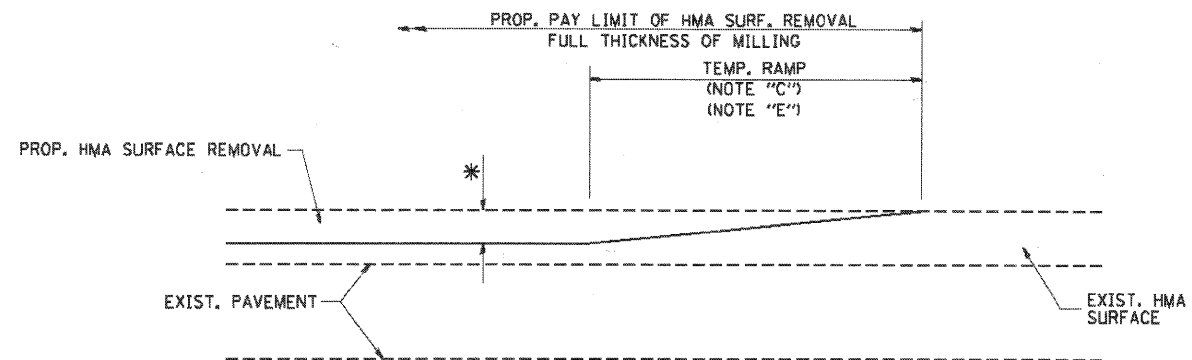
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|   |            | DRAWN      |                |
|   |            | CHECKED    |                |
|   |            | DATE       |                |
|   |            |            | 03-11-94       |

|            |                |
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| PLOT SCALE | 00.0000 "/ IN. |
| PLOT DATE  | 12/15/2009     |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

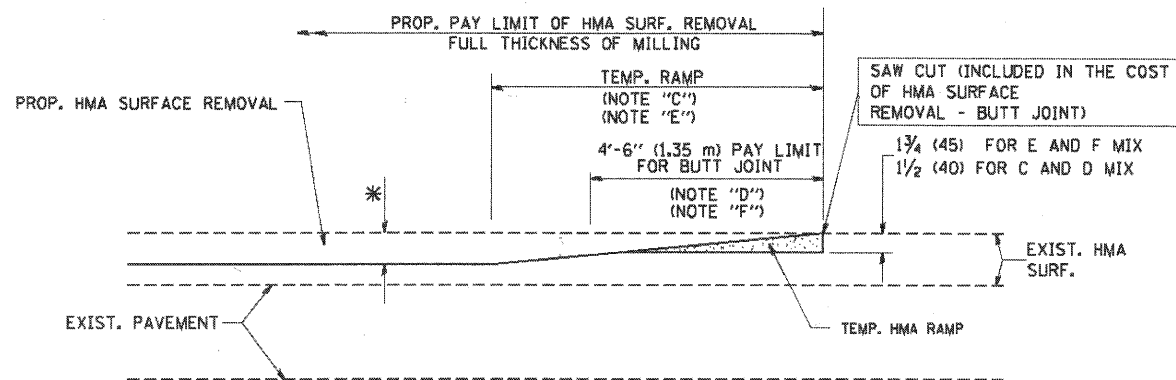
COMBINATION CURB AND GUTTER REMOVAL AND COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12  
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. TO STA.

| F.A. RTE.                                       | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----------------|--------|--------------|-----------|
|   | 07-00264-00-BR | KANE   | 164          | 147       |
| REVISED BD600-06 (BD-24) CONTRACT NO. 63620     |                |        |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                |        |              |           |



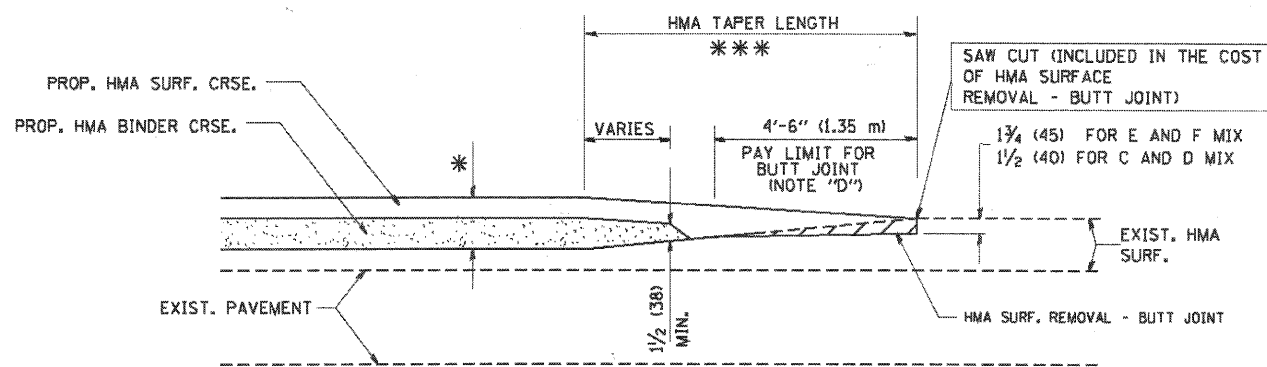
MILLED TEMPORARY RAMP  
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

**OPTION 1**



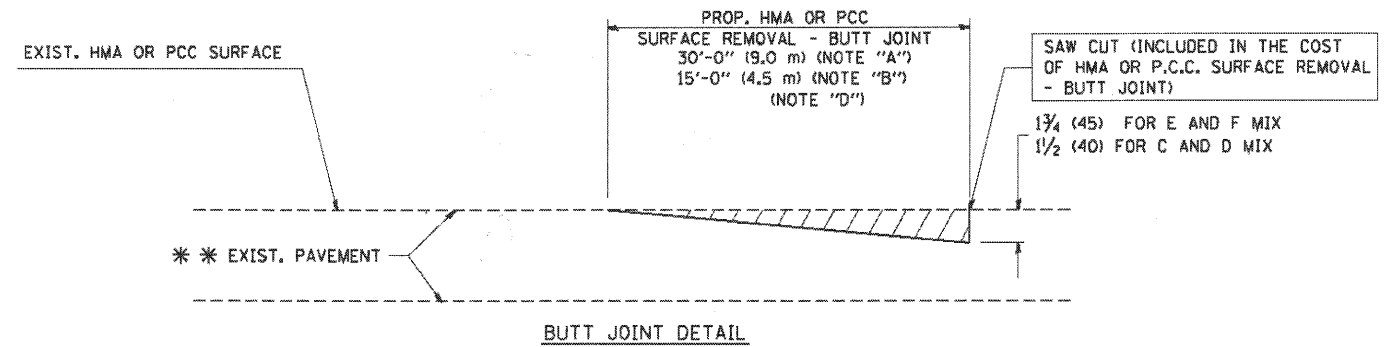
HMA CONSTRUCTED TEMPORARY RAMP  
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

**OPTION 2**  
**TYPICAL TEMPORARY RAMP**

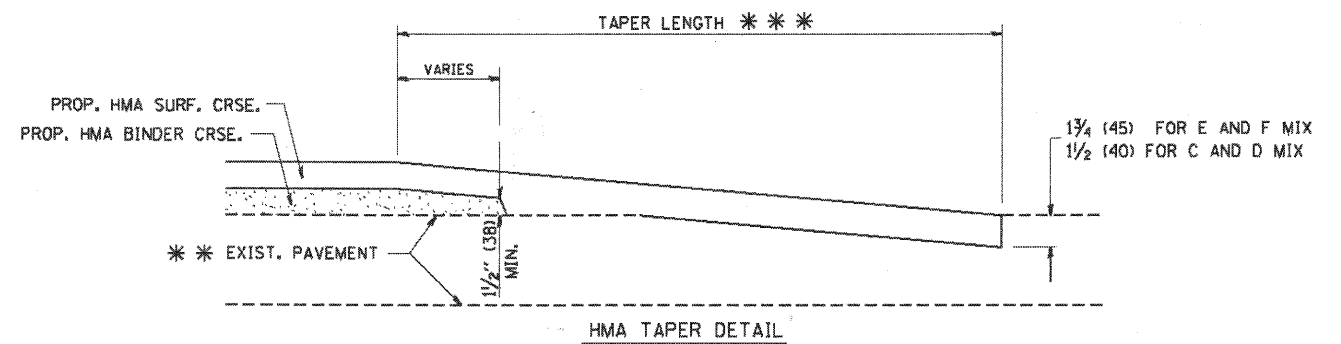


BUTT JOINT AND  
HMA TAPER

**TYPICAL BUTT JOINT AND HMA TAPER  
FOR MILLING AND RESURFACING**



BUTT JOINT DETAIL



HMA TAPER DETAIL

**TYPICAL BUTT JOINT AND HMA TAPER  
FOR RESURFACING ONLY**

\*\*\* PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

**NOTES**

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
  - B: MINOR SIDE ROADS.
  - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
  - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
  - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
  - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
  - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- \* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- \*\*\* 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")  
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

**BASIS OF PAYMENT:**

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

COMPANY NAME: HARGREAVES  
 PROJECT CONTACT: Michael G. Harding  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:07:07 AM  
 FILE NAME: 86090412-0e103.dgn  
 PLOT DRIVER: pcf.plt  
 PEN TABLE: Struct 22x34.tbl

FILE NAME = W:\d\stst\h22x34\bd32.dgn

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|-----------------------------|-----------------------|-----------------------------|
| USER NAME = geglencobt      | DESIGNED - M. DE YONG | REVISED - R. SHAH 10-25-94  |
| PLDT SCALE = 50.0000' / IN. | DRAWN -               | REVISED - A. ABBAS 03-21-97 |
| PLDT DATE = 1/4/2008        | CHECKED -             | REVISED - M. GOMEZ 04-06-01 |
|                             | DATE - 06-13-90       | REVISED - R. BORO 01-01-07  |

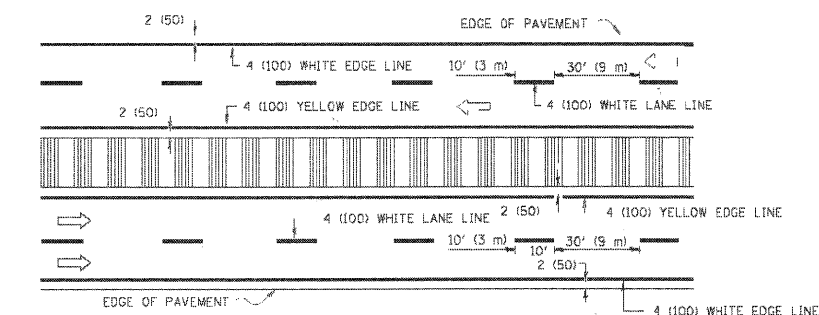
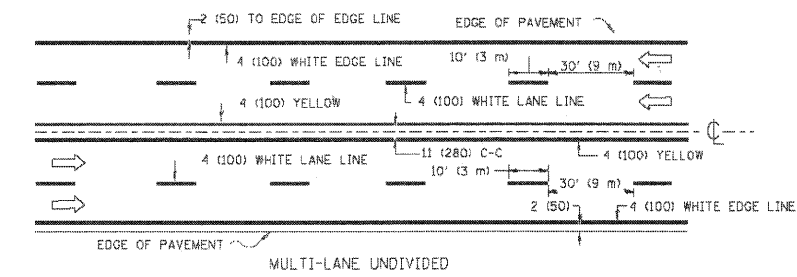
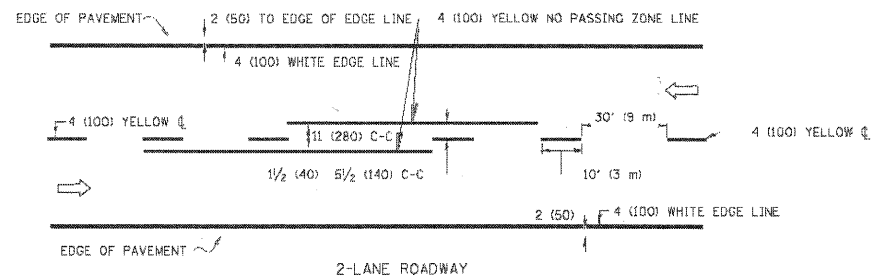
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND  
HMA TAPER DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

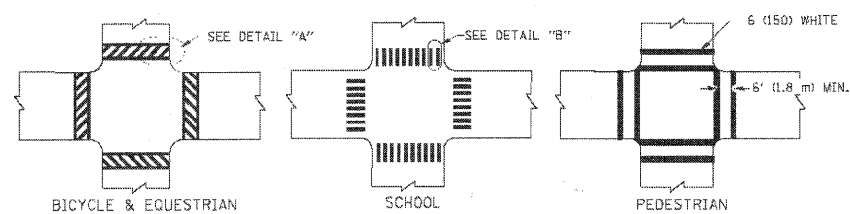
| F.A. RTE.                                       | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---|----------------|--------|--------------------|-----------|
|   | 07-00264-00-BR | KANE   | 164                | 148       |
| BD400-05 BD32                                   |                |        | CONTRACT NO. 63620 |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                |        |                    |           |



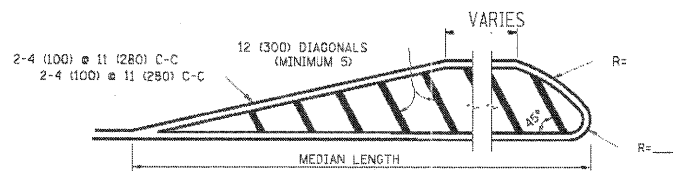
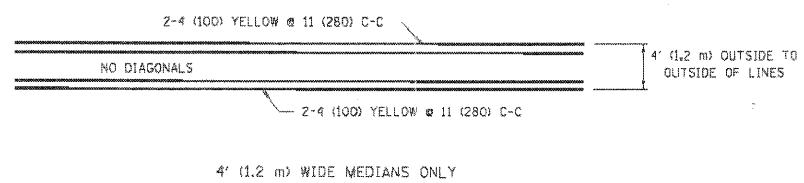


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

**TYPICAL LANE AND EDGE LINE MARKING**

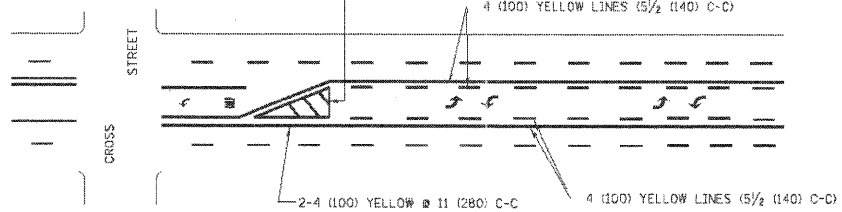


**TYPICAL CROSSWALK MARKING**



FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.  
 DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))  
 75' (23 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)  
 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

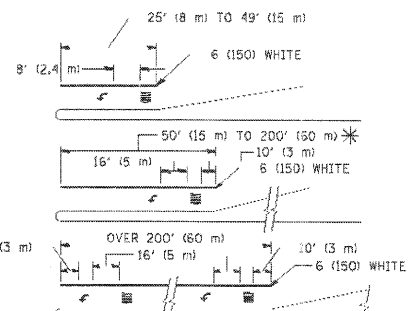
**MEDIANS OVER 4' (1.2 m) WIDE**



A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



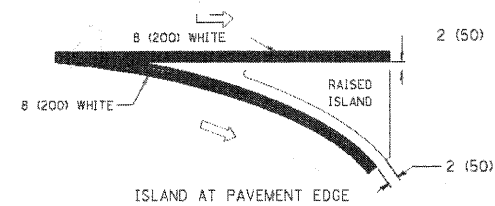
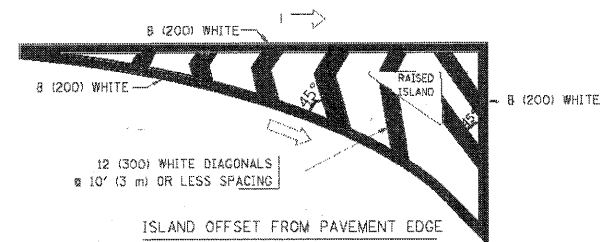
**TYPICAL PAINTED MEDIAN MARKING**



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
 \* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

**TYPICAL LEFT (OR RIGHT) TURN LANE**

**TYPICAL TURN LANE MARKING**



**TYPICAL ISLAND MARKING**

| TYPE OF MARKING   | WIDTH OF LINE  | PATTERN                         | COLOR   | SPACING / REMARKS  |
|---|--|---------------------------------|---|--|
| CENTERLINE ON 2 LANE PAVEMENT   | 4 (100)  | SKIP-DASH                       | YELLOW  | 10' (3 m) LINE WITH 30' (9 m) SPACE  |
| CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT   | 2 @ 4 (100)  | SOLID                           | YELLOW  | 11 (280) C-C   |
| NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS                                       | 4 (100)<br>2 @ 4 (100)   | SOLID<br>SOLID                  | YELLOW<br>YELLOW                                      | 5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE<br>11 (280) C-C<br>OMIT SKIP-DASH CENTERLINE BETWEEN   |
| LANE LINES  | 4 (100)<br>5 (125) ON FREEWAYS   | SKIP-DASH<br>SKIP-DASH          | WHITE<br>WHITE  | 10' (3 m) LINE WITH 30' (9 m) SPACE  |
| DOTTED LINES EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS                                     | SAME AS LINE BEING EXTENDED  | SKIP-DASH                       | SAME AS LINE BEING EXTENDED                           | 2' (600) LINE WITH 6' (1.8 m) SPACE  |
| EDGE LINES  | 4 (100)  | SOLID                           | YELLOW-LEFT<br>WHITE-RIGHT                            | OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB  |
| TURN LANE MARKINGS  | 6 (150) LINES FULL SIZE LETTERS & SYMBOLS (8' (2.4m))                                      | SOLID                           | WHITE   | SEE TYPICAL TURN LANE MARKING DETAIL   |
| TWO WAY LEFT TURN MARKING   | 2 @ 4 (100) EACH DIRECTION<br>8' (2.4m) LEFT ARROW   | SKIP-DASH AND SOLID<br>IN PAIRS | YELLOW<br>WHITE                                       | 10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE<br>SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL           |
| CROSSWALK LINES (PEDESTRIAN)<br>A. DIAGONALS (BIKE & EQUESTRIAN)<br>B. LONGITUDINAL BARS (SCHOOL) | 2 @ 6 (150)<br>12 (300) @ 45°<br>12 (300) @ 90°  | SOLID<br>SOLID<br>SOLID         | WHITE<br>WHITE<br>WHITE                               | NOT LESS THAN 6' (1.8 m) APART<br>2' (600) APART<br>2' (600) APART<br>SEE TYPICAL CROSSWALK MARKING DETAILS.   |
| STOP LINES  | 24 (600)   | SOLID                           | WHITE   | PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE |
| PAINTED MEDIANS   | 2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45°<br>NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS | SOLID                           | YELLOW<br>TWO WAY TRAFFIC<br>WHITE<br>ONE WAY TRAFFIC | 11 (280) C-C FOR THE DOUBLE LINE<br>SEE TYPICAL PAINTED MEDIAN MARKING.  |
| GORE MARKING AND CHANNELIZING LINES   | 8 (200) WITH 12 (300) DIAGONALS @ 45°  | SOLID                           | WHITE   | DIAGONALS:<br>15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h))<br>20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)<br>30' (9 m) C-C (OVER 45MPH (70 km/h))              |
| RAILROAD CROSSING   | 24 (600) TRANSVERSE LINES; "RR" 15 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"               | SOLID                           | WHITE   | SEE STATE STANDARD 78000L<br>AREA OF:<br>"R"=3.6 SQ. FT. (0.33 m²) EACH<br>"X"=54.0 SQ. FT. (5.0 m²)   |
| SHOULDER DIAGONALS  | 12 (300) @ 45°   | SOLID                           | WHITE - RIGHT<br>YELLOW - LEFT                        | 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))<br>75' (23 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h))<br>150' (45 m) C-C (OVER 45MPH (70 km/h))                       |

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 78000L.

All dimensions are in inches (millimeters) unless otherwise shown.

COMPANY NAME: HARGREY  
 PROJECT CONTACT: G. Harding  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:07:08 AM  
 FILE NAME: 86090472-0a104-dgn  
 PLOT DRIVER: pdf.plt  
 PLOT TABLE: Struct 29x34.tbl

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|  |                | DRAWN -          | REVISED - C. JUCIUS 09-09-09    |
|  |                | CHECKED -        |                                 |
|  |                | DATE - 03-19-90  |                                 |

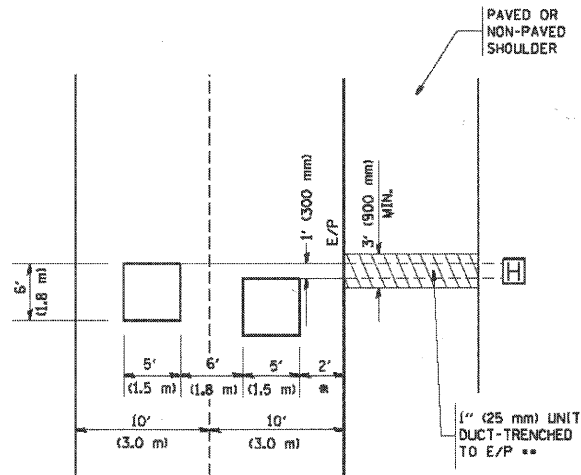
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE  
 TYPICAL PAVEMENT MARKINGS  
 SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

|   |                |                    |              |           |
|---|----------------|--------------------|--------------|-----------|
| F.A. RTE.                                       | SECTION        | COUNTY             | TOTAL SHEETS | SHEET NO. |
|   | 07-00264-00-BR | KANE               | 164          | 149       |
| TC-13   |                | CONTRACT NO. 63620 |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                |                    |              |           |

**LOOPS NEXT TO SHOULDERS**

PROVIDE A PAVEMENT REPLACEMENT  
NOTE WHICH SHOULD EQUAL  
3' (900 mm) X WIDTH OF  
PAVED SHOULDER.

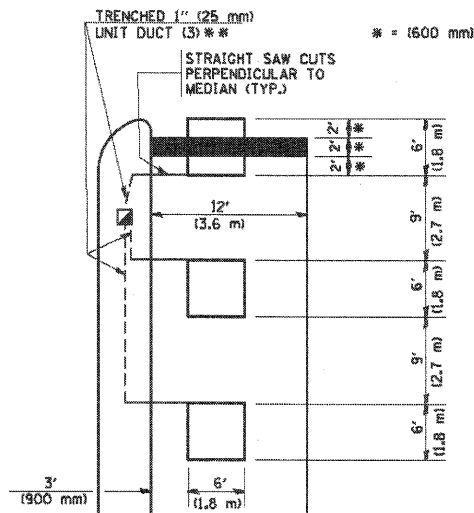


\* = (600 mm)

\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS  
BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

**LEFT TURN LANES WITH MEDIANS  
VOLUME DENSITY ("FAR OUT" DETECTION)  
ON SAME APPROACH  
(PROTECTED / PERMITTED LEFT TURN PHASING)**

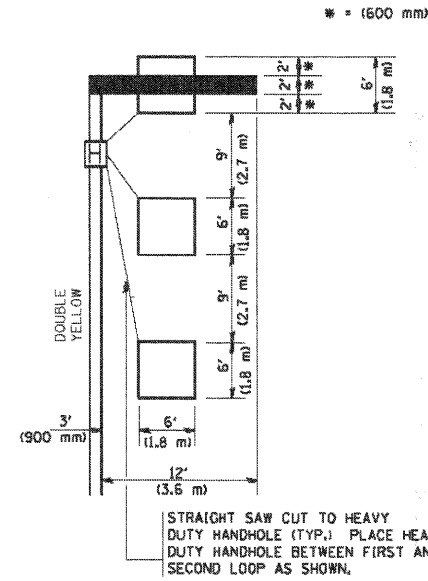
HANDHOLE LOCATION MAY  
VARY DEPENDING ON GEOMETRICS  
AND DESIGN OF TRAFFIC SIGNALS.  
HEAVY-DUTY HANDHOLES TO BE  
USED WHEN THE MEDIAN IS  
MOUNTABLE. REFER TO STANDARD  
814001 TO ENSURE THAT HANDHOLE  
FITS IN MEDIAN.



\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS  
BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

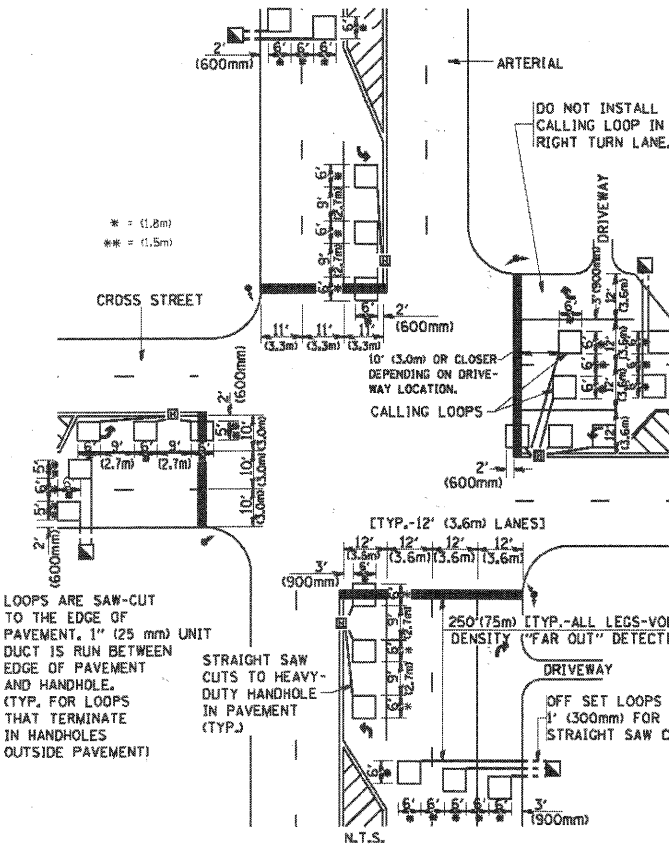
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO  
PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**LEFT TURN LANES WITHOUT MEDIANS  
VOLUME DENSITY ("FAR OUT" DETECTION)  
ON SAME APPROACH  
(PROTECTED / PERMITTED LEFT TURN PHASING)**



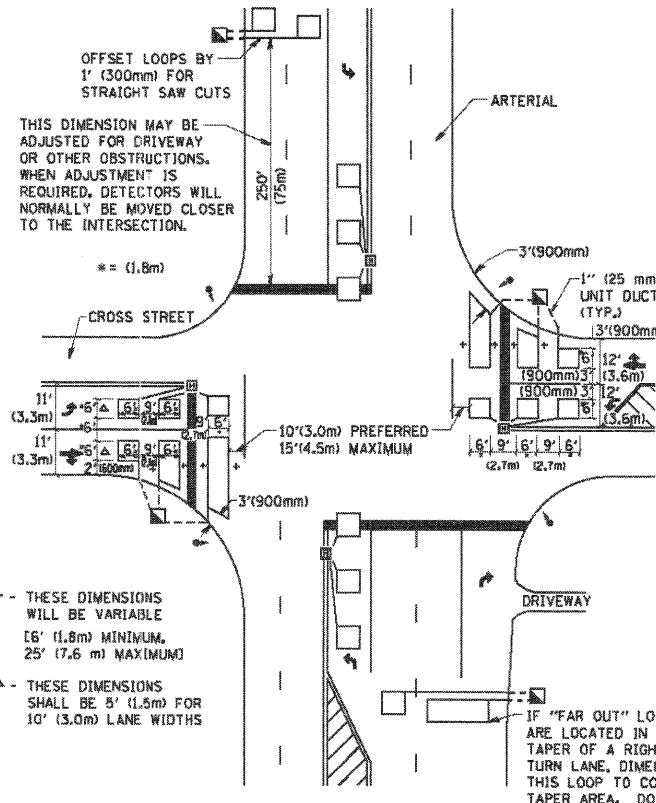
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO  
PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)  
CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)**



**DETAIL 1  
N.T.S.**

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)  
CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)**



**DETAIL 2  
N.T.S.**

**NOTES:**

**VEHICLES LOOP DETECTORS**

- \* ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATELY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- \* ONE DIMENSION OF ALL DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
- \* EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
- \* WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (i.e. 1-1/2, 1-3/4, 2).
- \* WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

**PLACEMENT OF DETECTORS**

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES. ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON ALL SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

**NOTE:**

ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

COMPANY NAME: HARGREAVES  
PROJECT CONTACT: Michael G. Harding  
CLIENT: City of Aurora  
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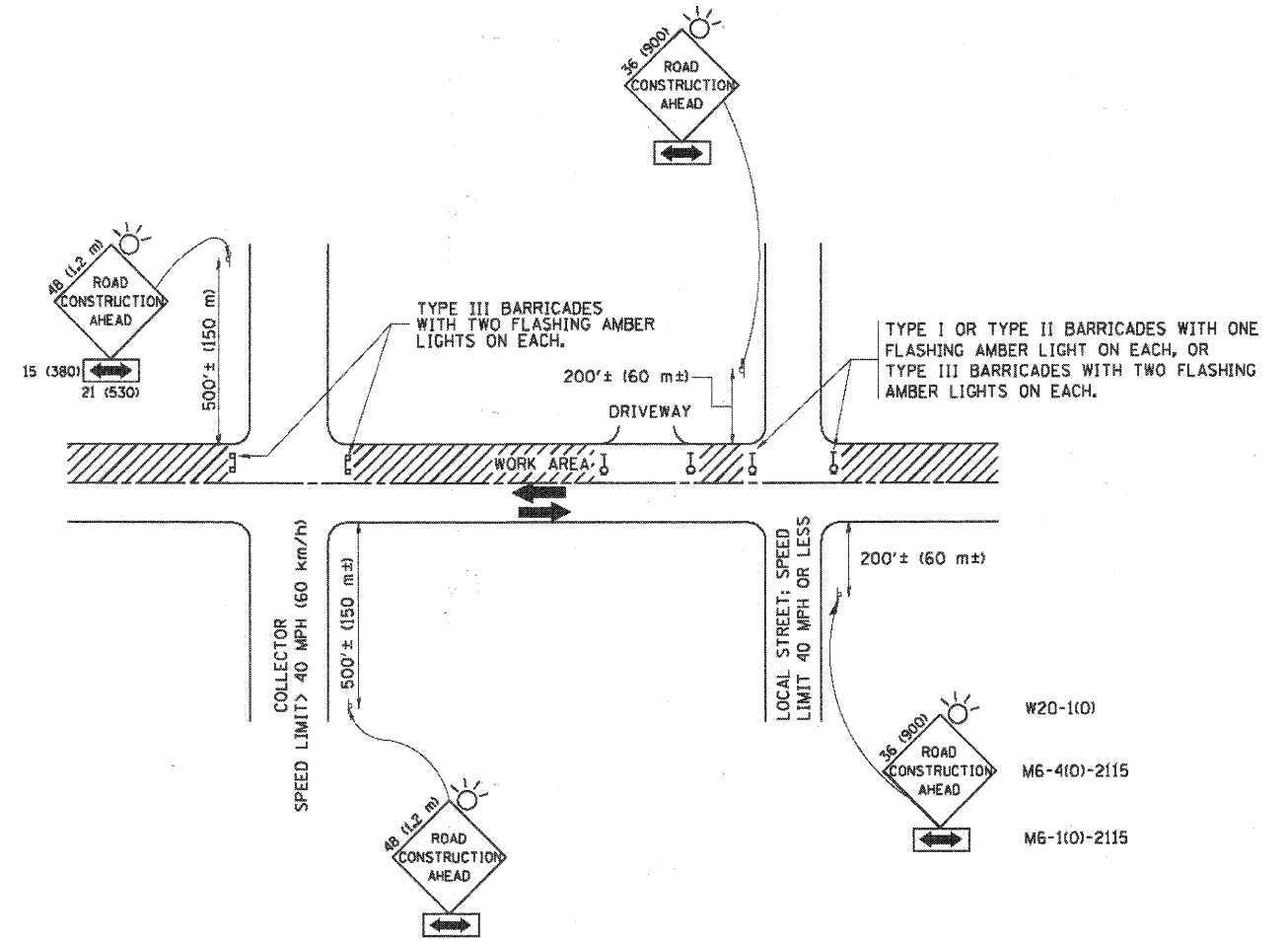
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| DESIGNED -       | REVISED - |
| DRAWN -          | REVISED - |
| CHECKED - R.K.F. | REVISED - |
| DATE -           | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT 1 - DETECTOR LOOP INSTALLATION  
DETAILS FOR ROADWAY RESURFACING**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

| F.A. RTE.                                       | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---|----------------|--------|--------------------|-----------|
|   | 07-00264-00-BR | KANE   | 164                | 150       |
| TS-07   |                |        | CONTRACT NO. 63620 |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                |        |                    |           |



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
  - 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
    - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
  - 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
    - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
  - USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael C. Harshing  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:07:11 AM  
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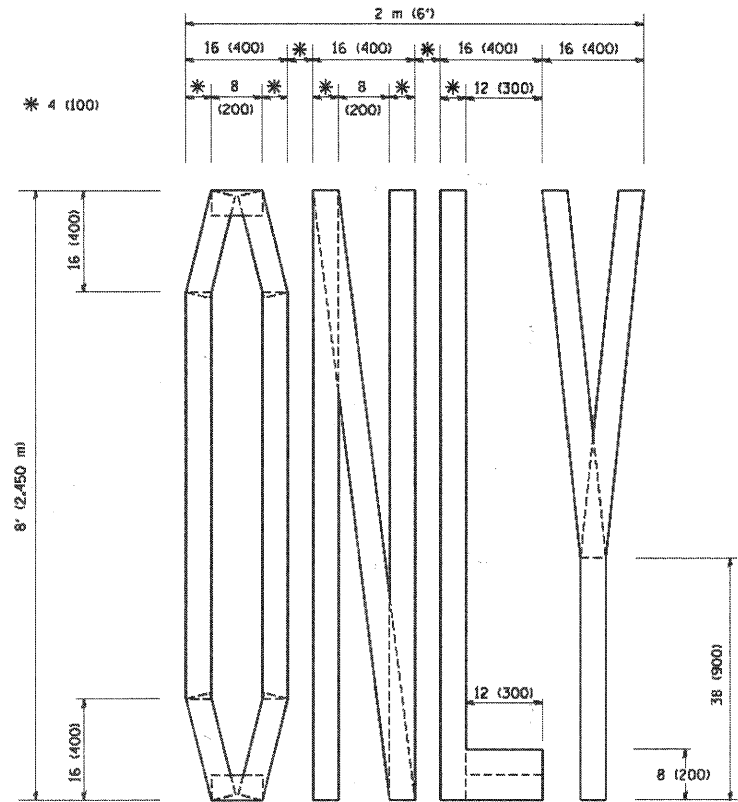
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

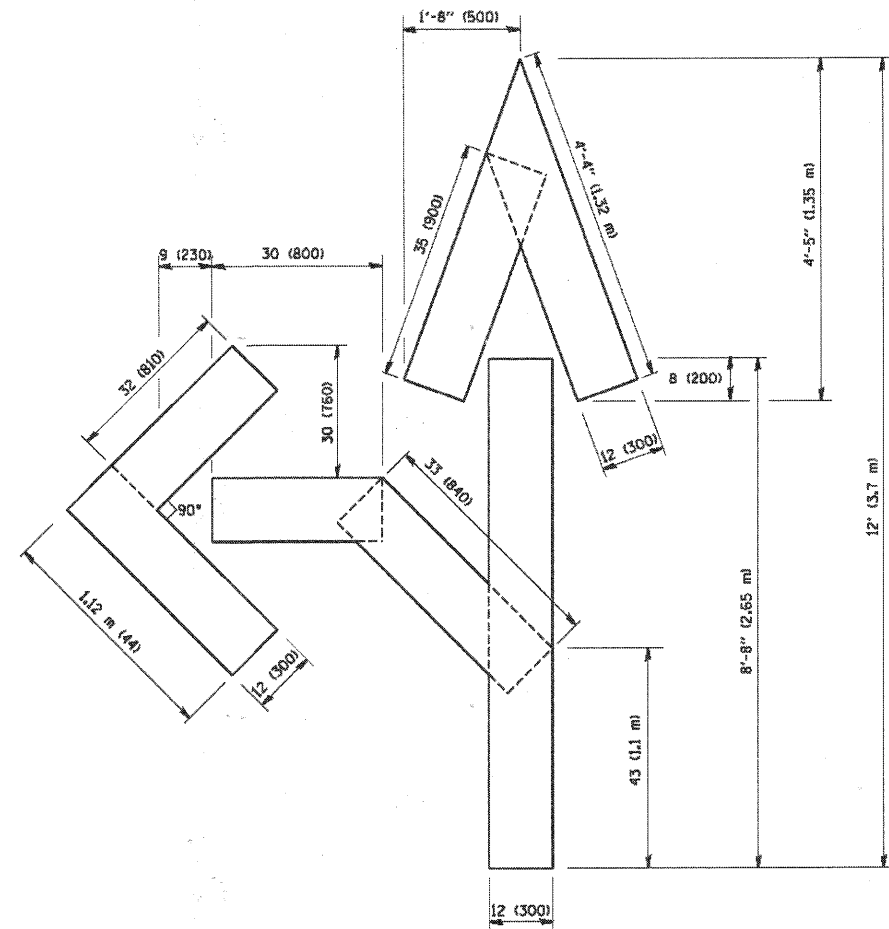
TRAFFIC CONTROL AND PROTECTION FOR  
 SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

|        |           |           |      |         |
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|--------|-----------|-----------|------|---------|

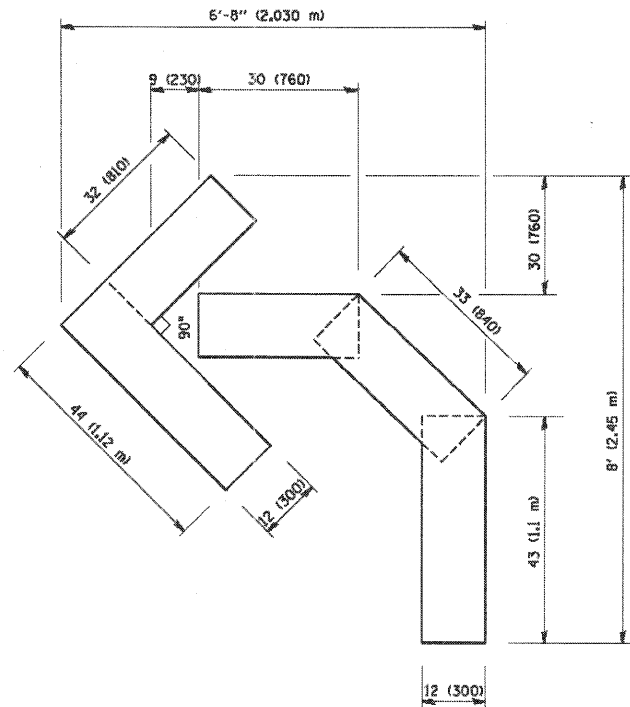
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| F.A.U. RTE.                                   | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|   | 07-00264-00-BR | KANE   | 164          | 151       |
| CONTRACT NO. 63620                            |                |        |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |                |        |              |           |



QUANTITY  
 4 (100) LINE = 64.1 ft. (19.7 m)  
 21.1 sq. ft. (1.97 sq. m)



QUANTITY  
 4 (100) LINE = 82.5 ft. (25.3 m)  
 27.5 sq. ft. (2.53 sq. m)



QUANTITY  
 4 (100) LINE = 45.5 ft. (13.9 m)  
 15.2 sq. ft. (1.39 sq. m)

All dimensions are in Inches (millimeters) unless otherwise shown.

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 CLIENT: City of Aurora  
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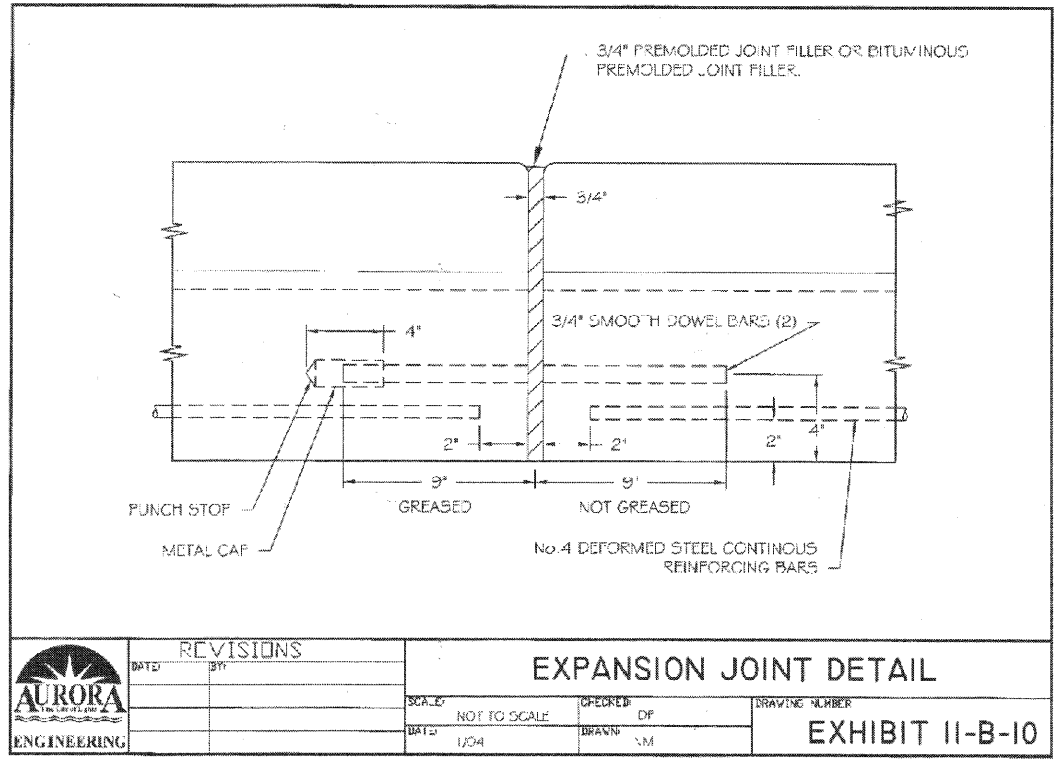
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| PLOT SCALE =                   | CHECKED -       | REVISED - T. RAMMACHER 03-02-98 |
| PLOT DATE = 7/26/2011          | DATE - 09-18-94 | REVISED - E. GOMEZ 08-28-00     |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

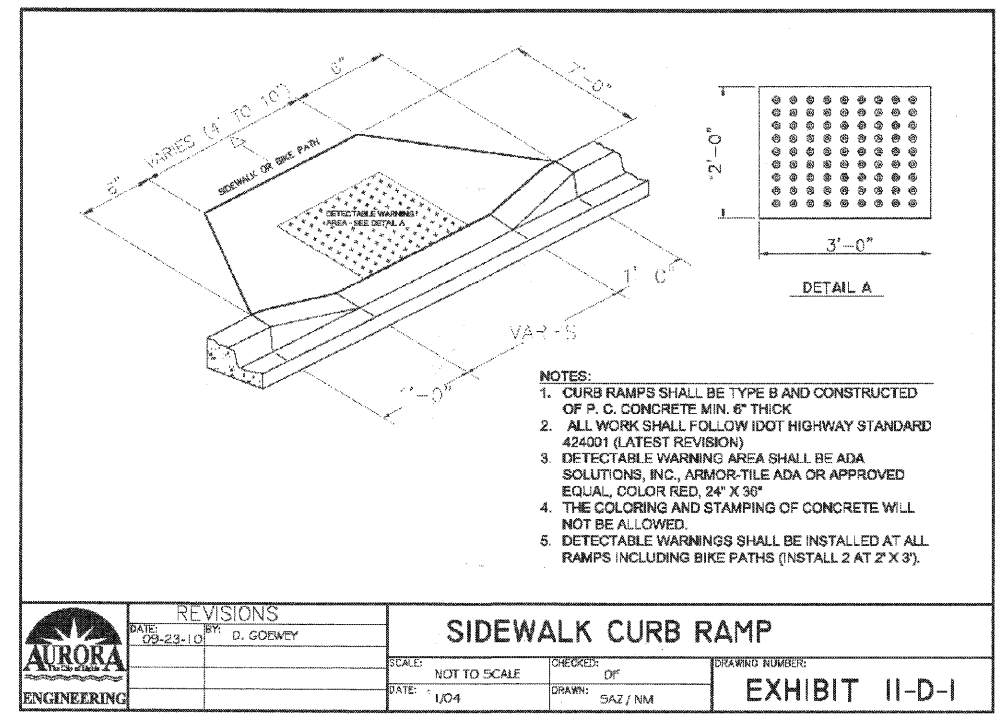
PAVEMENT MARKING LETTERS AND SYMBOLS  
 FOR TRAFFIC STAGING

|        |           |           |      |         |
|--------|-----------|-----------|------|---------|
| SCALE: | SHEET NO. | OF SHEETS | STA. | TO STA. |
|--------|-----------|-----------|------|---------|

| F.A.U. RTE.                                   | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----------------|--------|--------------|-----------|
|   | 07-00264-00-BR | KANE   | 164          | 152       |
| CONTRACT NO. 63620                            |                |        |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |                |        |              |           |



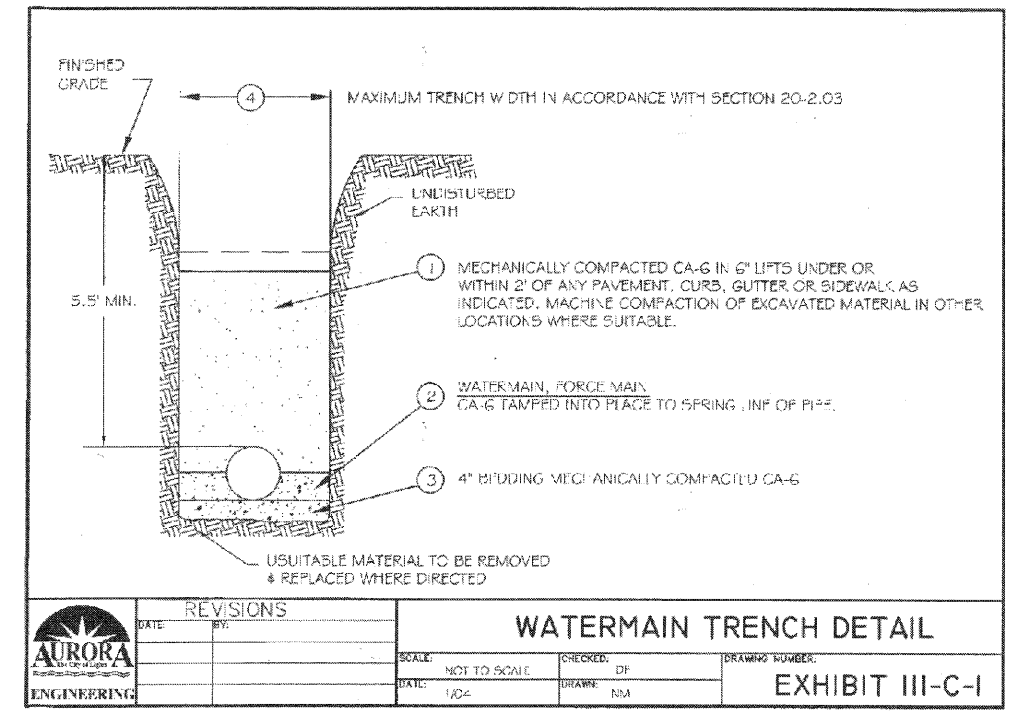
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|  |           | DATE: | DRAWN:                 | NM       |   |
|  |           | 1/04  |                        |          |   |



|  |           |          |                    |          |  |
|--|-----------|----------|--------------------|----------|--|
|  | REVISIONS |          | SIDEWALK CURB RAMP |          | DRAWING NUMBER:<br><b>EXHIBIT II-D-1</b> |
|  | DATE:     | BY:      | SCALE:             | CHECKED: |  |
|  |           |          | NOT TO SCALE       | DF       |  |
|  |           | DATE:    | DRAWN:             | SAZ / NM |  |
|  |           | 09-23-10 |                    |          |  |

- NOTES:**
1. CURB RAMP SHALL BE TYPE B AND CONSTRUCTED OF P. C. CONCRETE MIN. 6" THICK
  2. ALL WORK SHALL FOLLOW IDOT HIGHWAY STANDARD 424001 (LATEST REVISION)
  3. DETECTABLE WARNING AREA SHALL BE ADA SOLUTIONS, INC., ARMOR-TILE ADA OR APPROVED EQUAL, COLOR RED, 24" X 30"
  4. THE COLORING AND STAMPING OF CONCRETE WILL NOT BE ALLOWED.
  5. DETECTABLE WARNINGS SHALL BE INSTALLED AT ALL RAMPS INCLUDING BIKE PATHS (INSTALL 2 AT 2' X 3').

**CURB TAPER WILL BE MINIMUM 6" AT BUMPOUTS.**



|  |           |       |                         |          |   |
|--|-----------|-------|-------------------------|----------|---|
|  | REVISIONS |       | WATERMAIN TRENCH DETAIL |          | DRAWING NUMBER:<br><b>EXHIBIT III-C-1</b> |
|  | DATE:     | BY:   | SCALE:                  | CHECKED: |   |
|  |           |       | NOT TO SCALE            | DF       |   |
|  |           | DATE: | DRAWN:                  | NM       |   |
|  |           | 1/04  |                         |          |   |

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 CLIENT: City of Aurora  
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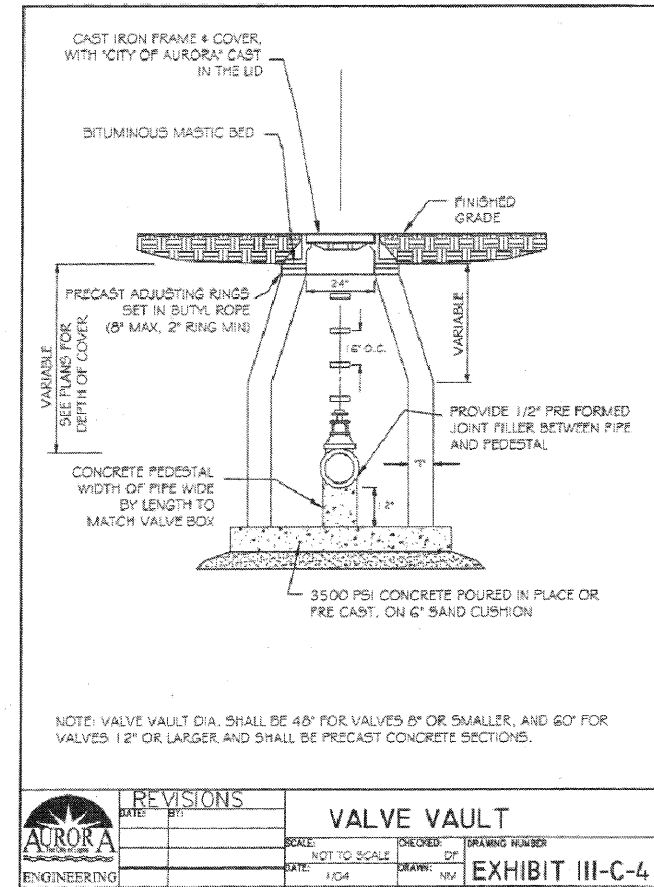
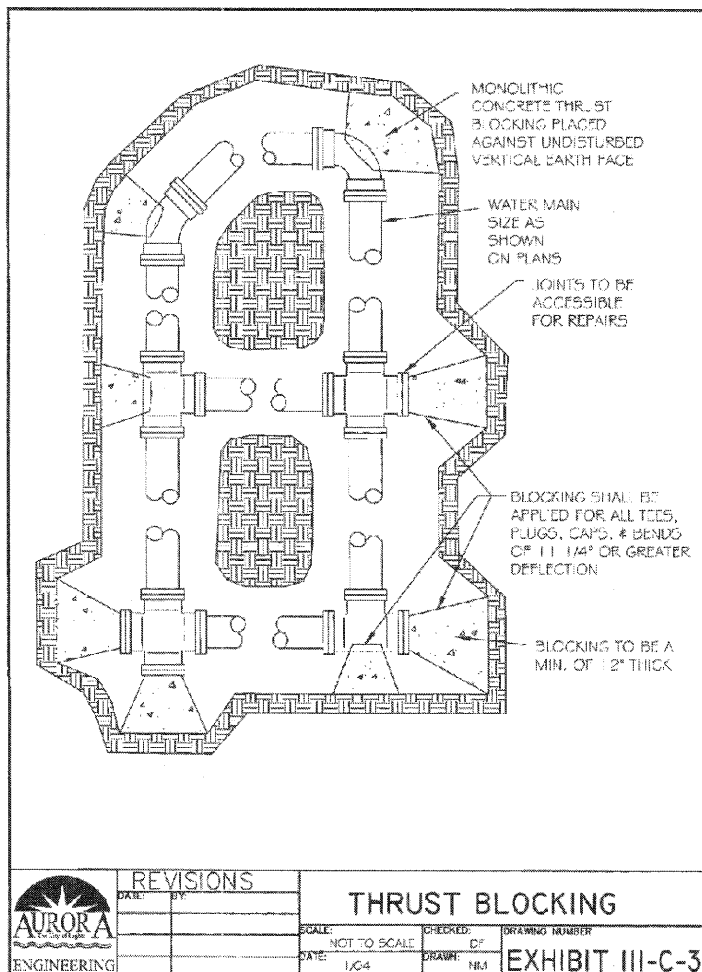
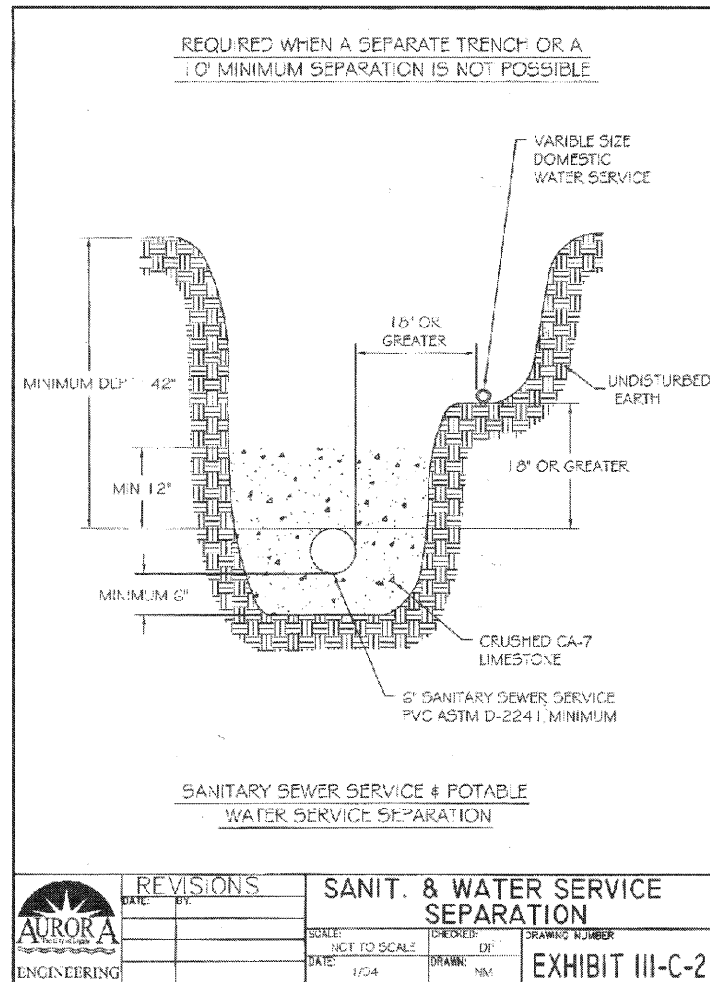
HRGreen.com  
 Illinois Professional Design Firm  
 #104-011322

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**CITY OF AURORA**

|                               |                         |      |         |
|-------------------------------|-------------------------|------|---------|
| <b>CITY OF AURORA DETAILS</b> |                         |      |         |
| <b>DOWNER PLACE</b>           |                         |      |         |
| SCALE:                        | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA. |

|                     |                |                           |              |           |
|---------------------|----------------|---------------------------|--------------|-----------|
| F.A.U. RTE.         | SECTION        | COUNTY                    | TOTAL SHEETS | SHEET NO. |
|                     | 07-00264-00-BR | KANE                      | 164          | 153       |
| CONTRACT NO. 63620  |                |                           |              |           |
| FED. ROAD DIST. NO. |                | ILLINOIS FED. AID PROJECT |              |           |



HRGREEN  
 COMPANY NAME: HRGREEN  
 PROJECT CONTACT: C. Hoood  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:07:15 AM  
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 PEN TABLE: Struct 20x34.tbl



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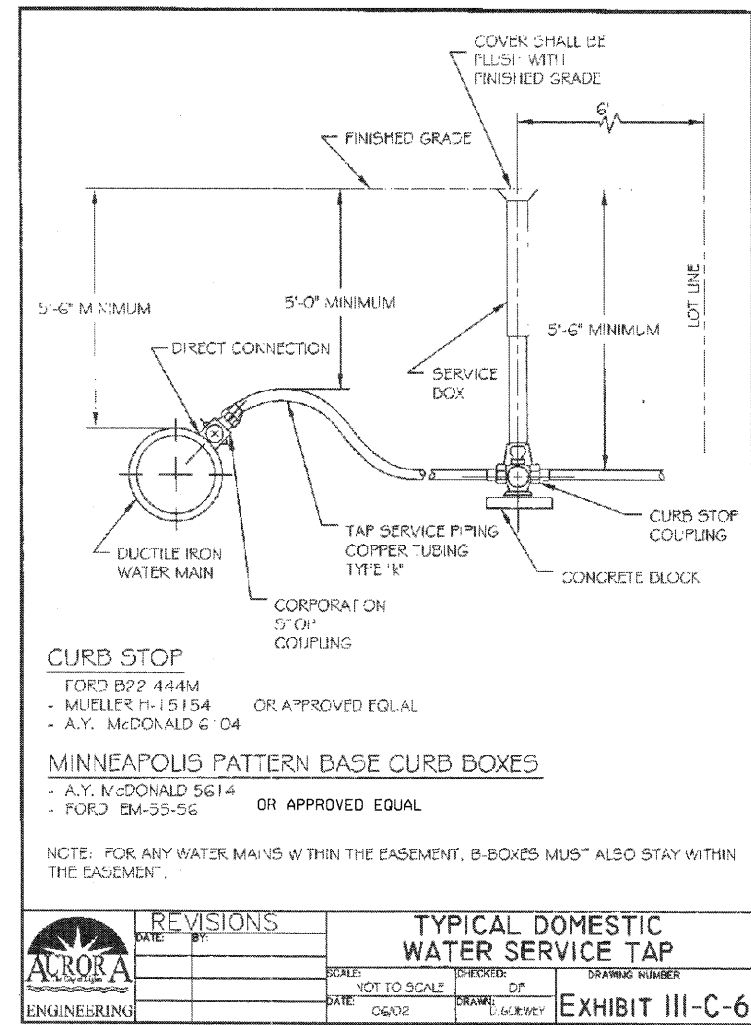
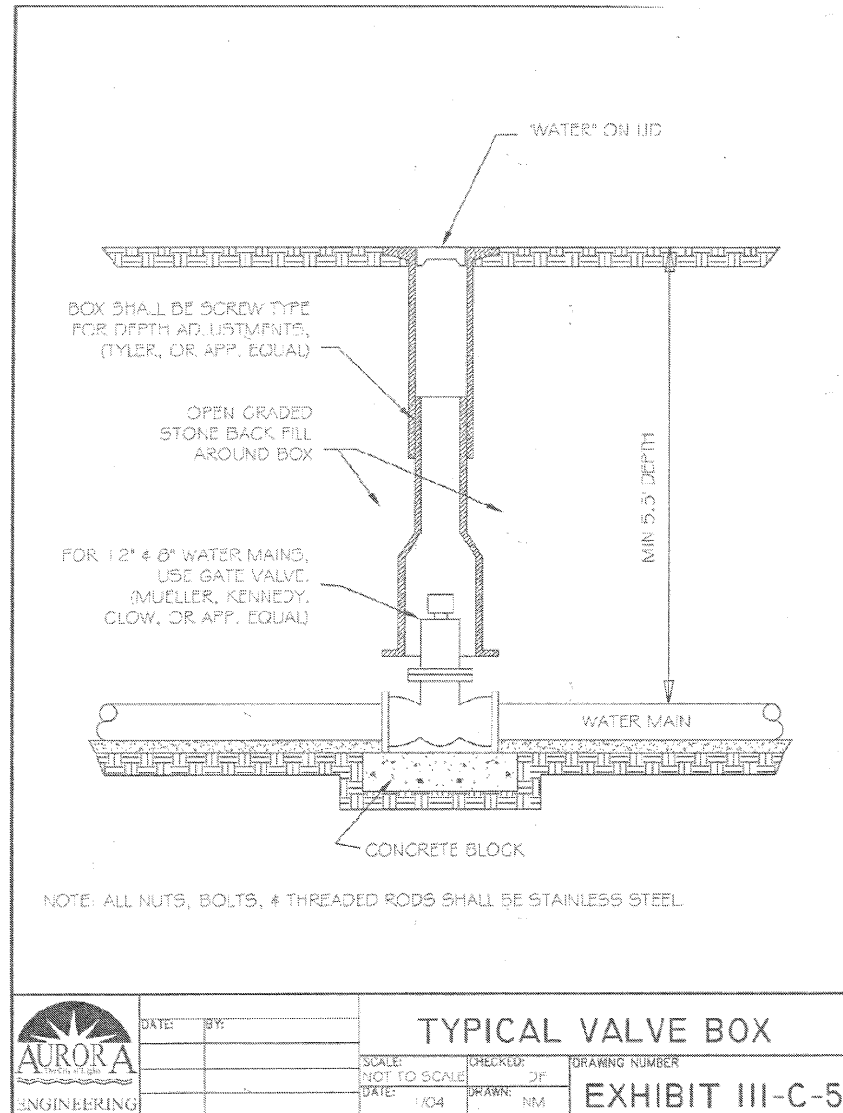
**CITY OF AURORA**

**CITY OF AURORA DETAILS  
DOWNER PLACE**

SCALE: SHEET NO. 2 OF 3 SHEETS STA. TO STA.

| F.A.U. RTE.        | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|----------------|--------|--------------|-----------|
|                    | 07-00264-00-BR | KANE   | 164          | 154       |
| CONTRACT NO. 63620 |                |        |              |           |

FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT



**CURB STOP**  
 - FORD B22 444M OR APPROVED EQUAL  
 - MUELLER H-15154  
 - A.Y. McDONALD 6' 04

**MINNEAPOLIS PATTERN BASE CURB BOXES**  
 - A.Y. McDONALD 5614 OR APPROVED EQUAL  
 - FORD EM-55-56

NOTE: FOR ANY WATER MAINS WITHIN THE EASEMENT, B-BOXES MUST ALSO STAY WITHIN THE EASEMENT.

|  |              |          |                          |                        |
|--|--------------|----------|--------------------------|------------------------|
|  | DATE:        | BY:      | <b>TYPICAL VALVE BOX</b> |                        |
|  | SCALE:       | CHECKED: |                          |                        |
|  | NOT TO SCALE | DF       |                          | <b>EXHIBIT III-C-5</b> |
|  | DATE:        | DRAWN:   | NM                       |                        |

|  |           |     |   |                        |
|--|-----------|-----|---|------------------------|
|  | REVISIONS |     | <b>TYPICAL DOMESTIC WATER SERVICE TAP</b> |                        |
|  | DATE:     | BY: | SCALE:                                    | CHECKED:               |
|  |           |     | NOT TO SCALE                              | DF                     |
|  |           |     | DATE:                                     | DRAWN:                 |
|  |           |     | 06/02                                     | L. GURVEY              |
|  |           |     |   | <b>EXHIBIT III-C-6</b> |

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:07:17 AM  
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**HRGreen.com**  
 Illinois Professional Design Firm  
 #184-001322

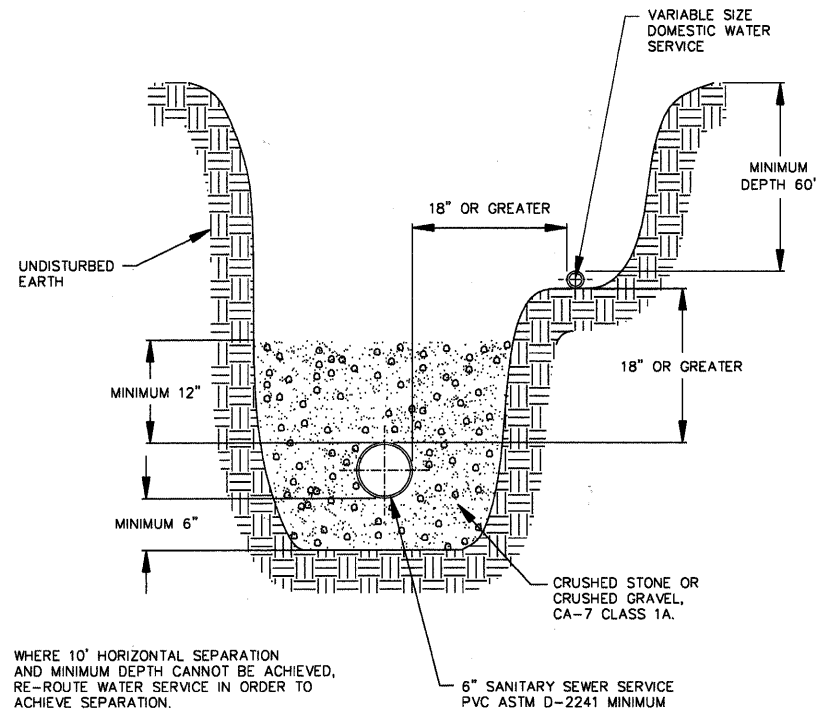
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| PLOT DATE =  | 7/26/2011         | DATE -     | 7/26/11 | REVISED - |  |

**CITY OF AURORA**

|                               |                         |      |         |
|-------------------------------|-------------------------|------|---------|
| <b>CITY OF AURORA DETAILS</b> |                         |      |         |
| <b>DOWNER PLACE</b>           |                         |      |         |
| SCALE:                        | SHEET NO. 3 OF 3 SHEETS | STA. | TO STA. |

|   |                |        |              |           |
|---|----------------|--------|--------------|-----------|
| F.A.U. RTE.                                   | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|   | 07-00264-00-BR | KANE   | 164          | 155       |
| CONTRACT NO. 63620                            |                |        |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |                |        |              |           |

**REQUIRED WHEN A 10' MINIMUM SEPARATION IS NOT POSSIBLE FOR WATER AND SEWER SERVICES**

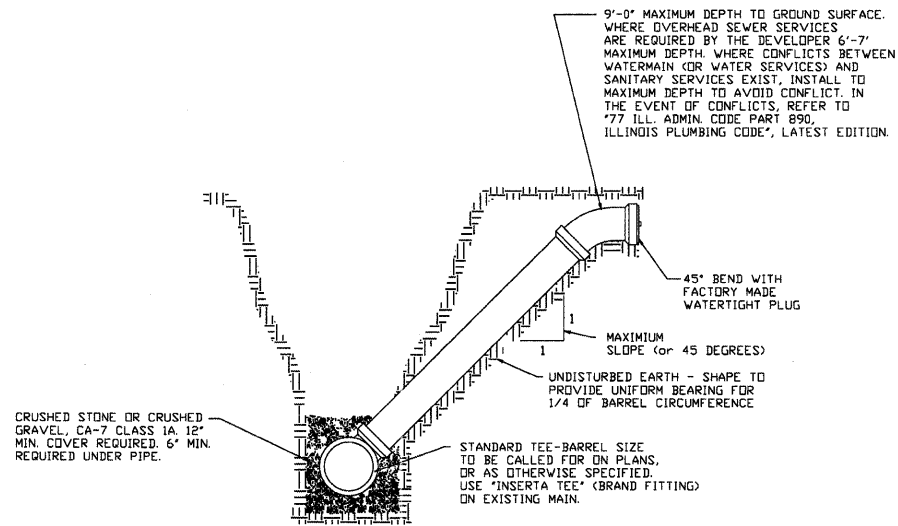


WHERE 10' HORIZONTAL SEPARATION AND MINIMUM DEPTH CANNOT BE ACHIEVED, RE-ROUTE WATER SERVICE IN ORDER TO ACHIEVE SEPARATION.

**NOTE**

INSTALL PER "77 ILL. ADMIN. CODE PART 890 ILLINOIS PLUMBING CODE" LATEST EDITION.

**SANITARY SEWER SERVICE & POTABLE WATER SERVICE SEPARATION**

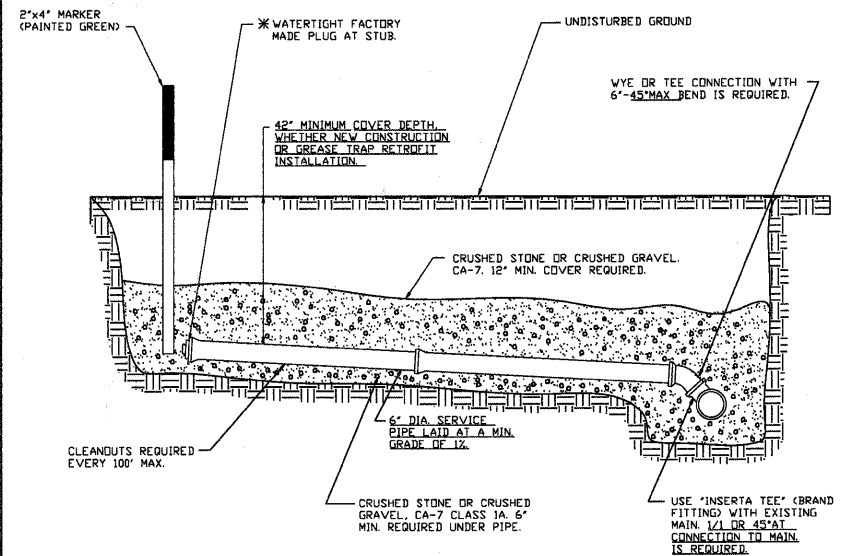


**NOTE**

RISERS TO BE CONSTRUCTED WHERE SEWER DEPTH EXCEEDS 12'-0". FOR PIPE MATERIAL SEE SPECIFICATIONS ON PLANS.

**GREATER THAN 45° CONNECTION TO MAIN NOT ALLOWED**

**TYPICAL RISER FOR SERVICE LATERAL**



\* 9' MAXIMUM DEPTH TO GROUND SURFACE. WHERE OVERHEAD SEWER SERVICES ARE REQUIRED BY THE DEVELOPER 7' MAXIMUM DEPTH. WHERE CONFLICTS BETWEEN WATERMAIN (OR WATER SERVICES) AND SANITARY SERVICES EXIST, INSTALL TO MAXIMUM DEPTH TO AVOID CONFLICT. IN THE EVENT OF CONFLICTS, REFER TO "77 ILL. ADMIN. CODE PART 890, ILLINOIS PLUMBING CODE", LATEST EDITION.

**NOTE**

SELECT GRANULAR BACKFILL, REQUIRED UNDER PAVED AREAS, TO BE APPROVED BY APPROPRIATE CITY OR VILLAGE.

**GREATER THAN 45° CONNECTION NOT ALLOWED**

**SERVICE CONNECTION**

**Fox Metro**  
Water Reclamation District

| DESIGNED | FMWRD    | REVISION        | 2011     |
|----------|----------|-----------------|----------|
| DRAWN    | KWZ      | A Revised 2004  | 01/25/04 |
| APPROVED | JH       | B Depth Note    | 02/23/05 |
| DATE     | 08-28-00 | C Note Revision | 01/20/06 |
| SCALE    | NTS      |                 |          |
| SHEET    | 1        | CAD DWG.        | REVISION |
| OF       | 1        | JOB NO.         | C        |

**Fox Metro**  
Water Reclamation District

| DESIGNED | FMWRD    | REVISION                 | 2011     |
|----------|----------|--------------------------|----------|
| DRAWN    | KWZ      | C 45° Note Added         | 02/02/05 |
| APPROVED | JH       | D Riser & Stone Note     | 01/30/06 |
| DATE     | 05-15-00 | E Riser & Conflict Notes | 03/19/07 |
| SCALE    | NTS      | F Conflict Note          | 04/29/08 |
| SHEET    | 1        | CAD DWG.                 | REVISION |
| OF       | 1        | JOB NO.                  | E        |

**Fox Metro**  
Water Reclamation District

| DESIGNED | FMWRD    | REVISION                 | 2011     |
|----------|----------|--------------------------|----------|
| DRAWN    | KWZ      | C 45° Note Added         | 02/02/05 |
| APPROVED | JH       | D Stone Note Added       | 01/30/06 |
| DATE     | 05-12-00 | E Inset & Note Revisions | 03/19/07 |
| SCALE    | NTS      | F Note Revisions         | 04/29/08 |
| SHEET    | 1        | CAD DWG.                 | REVISION |
| OF       | 1        | JOB NO.                  | F        |

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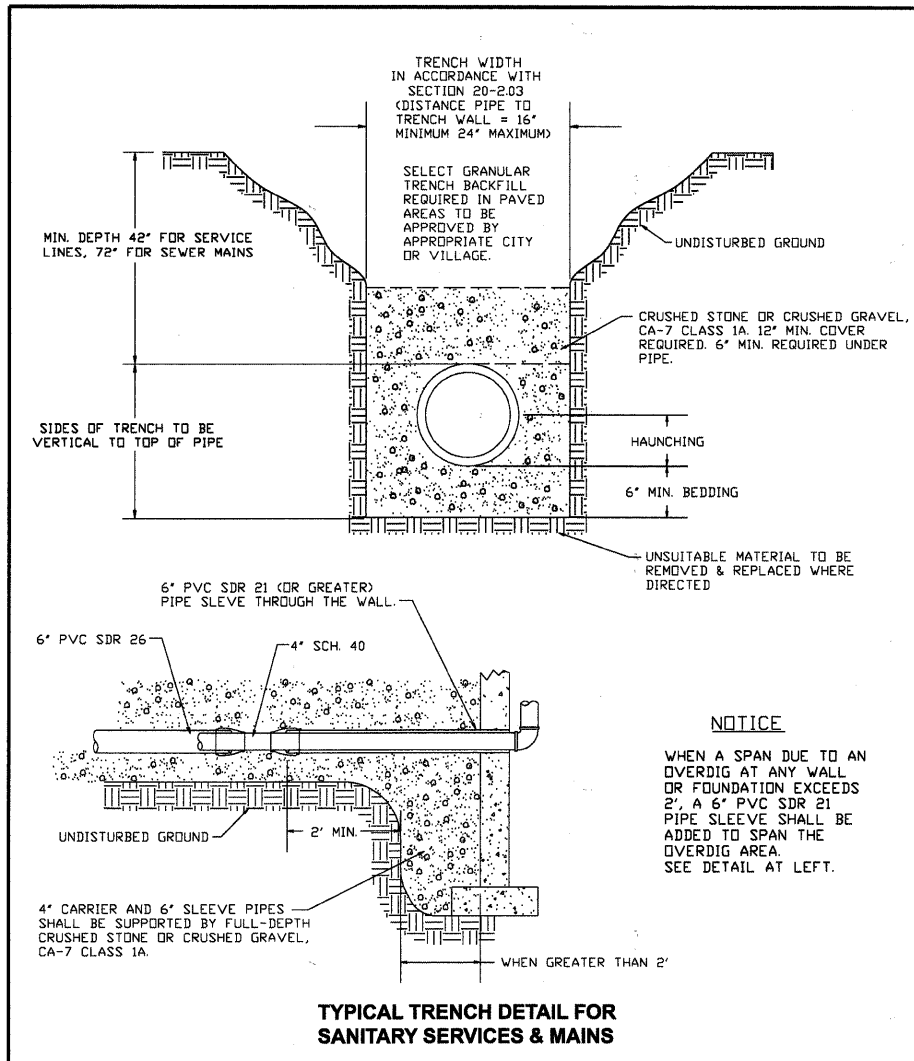
**CITY OF AURORA**

**FOX METRO DETAILS  
DOWNER PLACE**

SCALE: SHEET NO. 1 OF 2 SHEETS STA. TO STA.

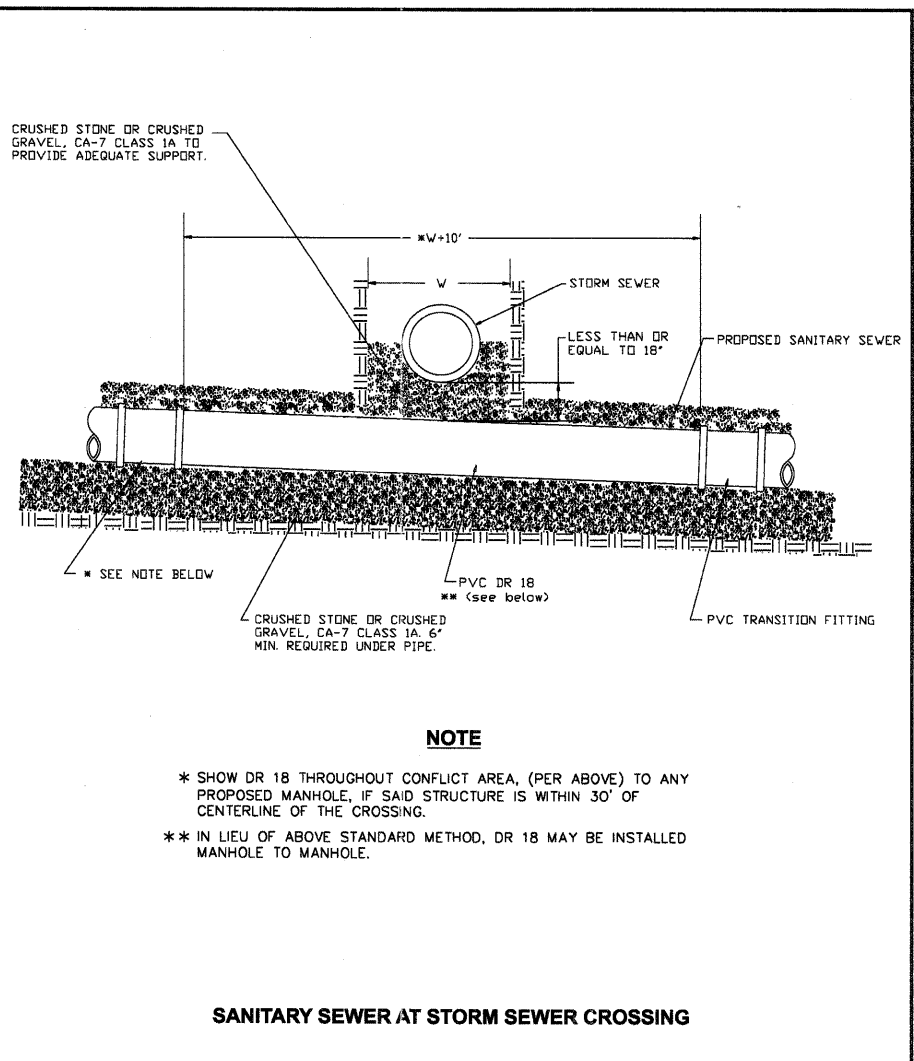
| F.A.U. RTE.                                   | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----------------|--------|--------------|-----------|
|   | 07-00264-00-BR | KANE   | 164          | 156       |
| CONTRACT NO. 63620                            |                |        |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |                |        |              |           |





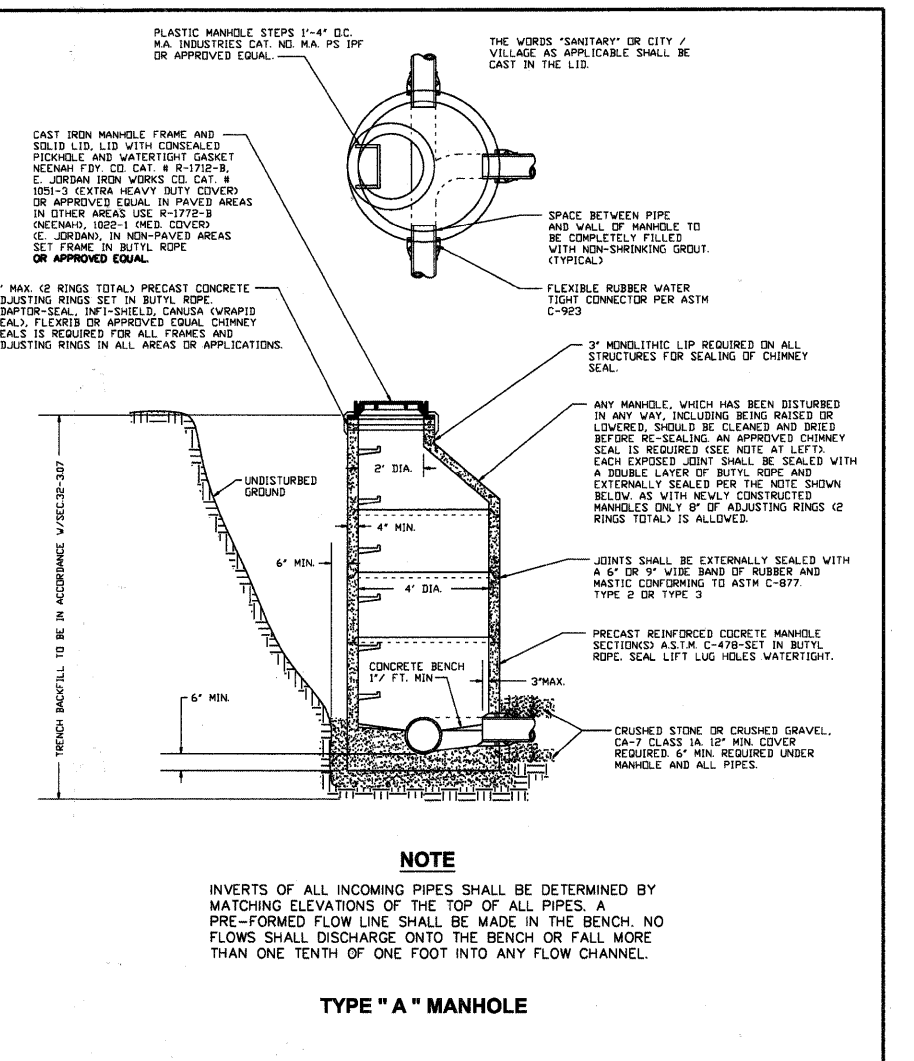
TYPICAL TRENCH DETAIL FOR SANITARY SERVICES & MAINS

**NOTICE**  
WHEN A SPAN DUE TO AN OVERDIG AT ANY WALL OR FOUNDATION EXCEEDS 2', A 6" PVC SDR 21 PIPE SLEEVE SHALL BE ADDED TO SPAN THE OVERDIG AREA. SEE DETAIL AT LEFT.



SANITARY SEWER AT STORM SEWER CROSSING

**NOTE**  
\* SHOW DR 18 THROUGHOUT CONFLICT AREA, (PER ABOVE) TO ANY PROPOSED MANHOLE, IF SAID STRUCTURE IS WITHIN 30' OF CENTERLINE OF THE CROSSING.  
\*\* IN LIEU OF ABOVE STANDARD METHOD, DR 18 MAY BE INSTALLED MANHOLE TO MANHOLE.



TYPE "A" MANHOLE

**NOTE**  
INVERTS OF ALL INCOMING PIPES SHALL BE DETERMINED BY MATCHING ELEVATIONS OF THE TOP OF ALL PIPES. A PRE-FORMED FLOW LINE SHALL BE MADE IN THE BENCH. NO FLOWS SHALL DISCHARGE ONTO THE BENCH OR FALL MORE THAN ONE TENTH OF ONE FOOT INTO ANY FLOW CHANNEL.

**Fox Metro**  
Water Reclamation District

| DESIGNED | FWWRD    | REVISION             | 2011     |
|----------|----------|----------------------|----------|
| DRAWN    | KWZ      | B Dimension Revision | 12/11/01 |
| APPROVED | JH       | C Revised 2004       | 01/28/04 |
| DATE     | 05-12-00 | D Stone Note         | 01/30/06 |
| SCALE    | NTS      | E 07 Revisions       | 03/19/07 |
| SHEET    | 1        | CAD DWG.             | REVISION |
| OF       | 1        | JOB NO.              | E        |

**Fox Metro**  
Water Reclamation District

| DESIGNED | FWWRD    | REVISION                  | 2011     |
|----------|----------|---------------------------|----------|
| DRAWN    | KWZ      | D Revised 2004            | 01/28/04 |
| APPROVED | JH       | E Note Revision           | 01/30/06 |
| DATE     | 05-15-00 | F Fitting & Note Revision | 03/19/07 |
| SCALE    | NTS      | G Dimension Change        | 04/30/08 |
| SHEET    | 1        | CAD DWG.                  | REVISION |
| OF       | 1        | JOB NO.                   | G        |

**Fox Metro**  
Water Reclamation District

| DESIGNED | FWWRD    | REVISION             | 2011     |
|----------|----------|----------------------|----------|
| DRAWN    | KWZ      | C External Seal Note | 02/03/06 |
| APPROVED | JH       | D Invert Notes       | 01/30/06 |
| DATE     | 05-12-00 | E Chimney Seal Note  | 03/19/07 |
| SCALE    | NTS      | F Note Revisions     | 04/29/08 |
| SHEET    | 1        | CAD DWG.             | REVISION |
| OF       | 1        | JOB NO.              | F        |

COMPANY NAME: HRGreen  
PROJECT CONTACT: Michael G. Harding  
CLIENTS: City of Aurora  
DATE PLOTTED: 7/26/2011 11:07:28 AM  
FILE NAME: 86690472-00113.dgn  
PLOT DRIVER: pdf.plt  
PEN TABLE: Struct 22x34.tbl

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#184-001322

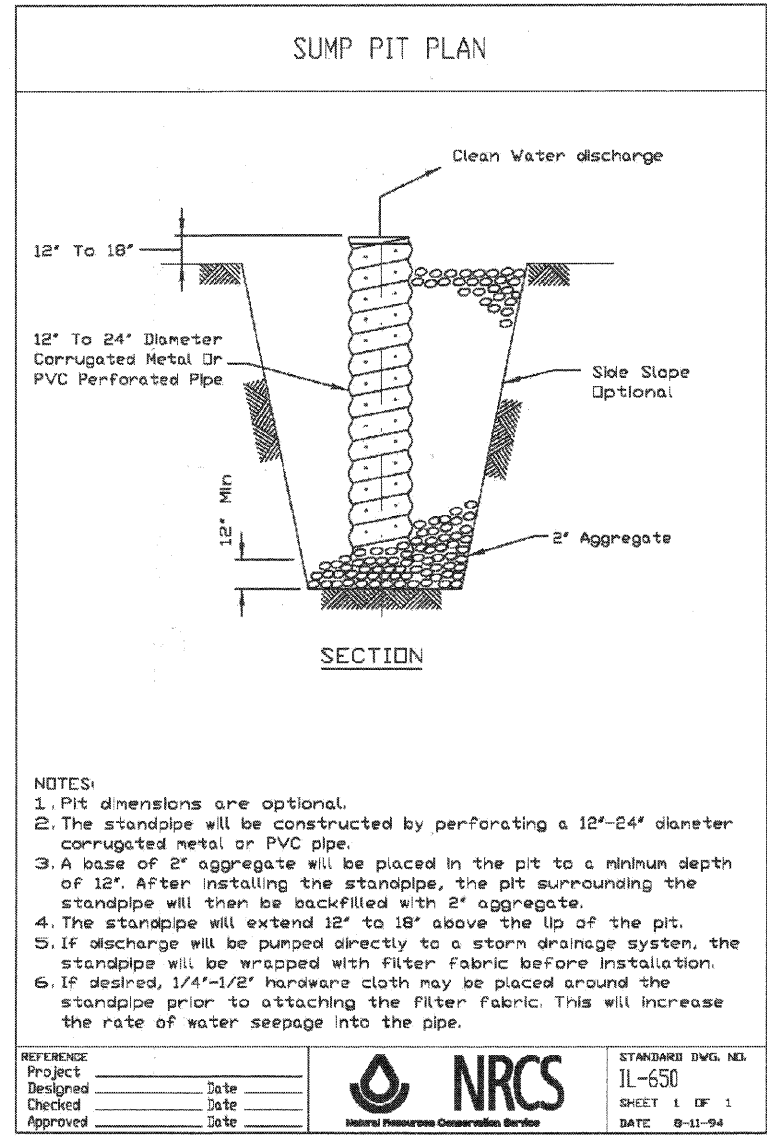
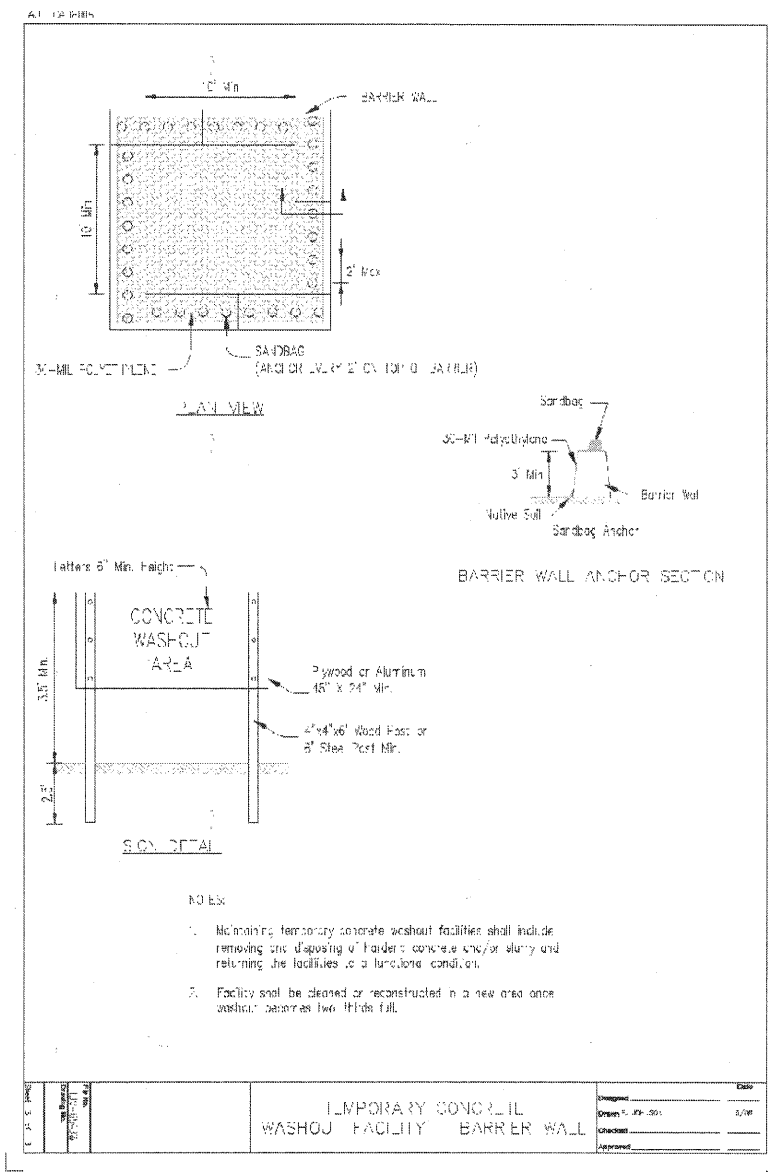
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| PLOT DATE = 7/26/2011          | DATE - 7/26/11 | REVISED - |

**CITY OF AURORA**

**FOX METRO DETAILS**  
**DOWNER PLACE**

SCALE: SHEET NO. 2 OF 2 SHEETS STA. TO STA.

| F.A.U. RTE.                                   | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----------------|--------|--------------|-----------|
|   | 07-00264-00-BR | KANE   | 164          | 157       |
| CONTRACT NO. 63620                            |                |        |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |                |        |              |           |



HRGREEN  
Company Name: HRGreen  
Project Contact: Michael G. Herd  
Date Plotted: 7/26/2011 11:07:42 AM  
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Plot Driver: default  
Pen Table: Struct 22x34.tbl

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#184-001322

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| PLOT DATE = 7/26/2011         | DATE - 7/26/11 | REVISED - |

**CITY OF AURORA**

**KANE-DUPAGE SWCD DETAILS  
DOWNER PLACE**

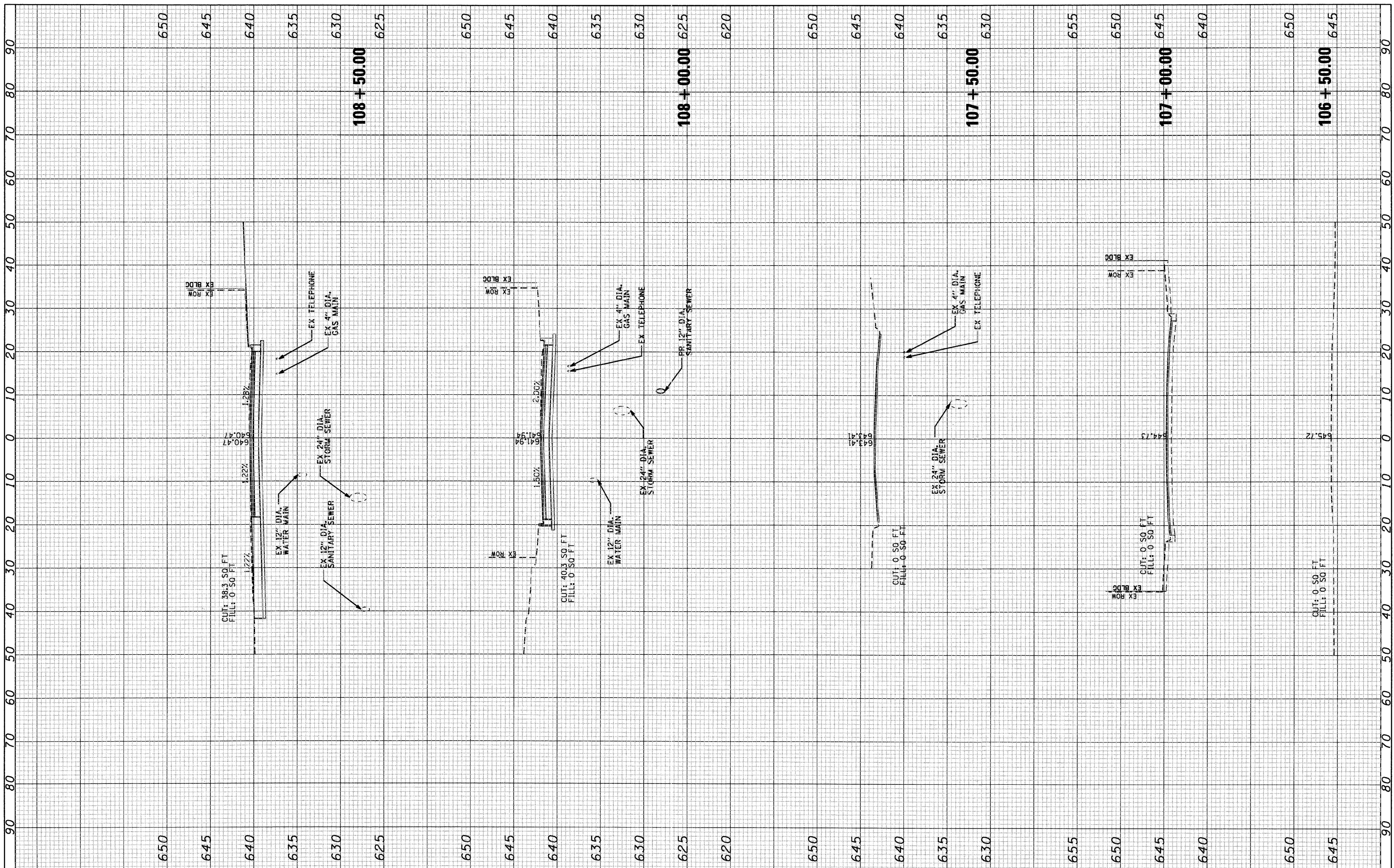
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| F.A.U. RTE.                                     | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----------------|--------|--------------|-----------|
|   | 07-00264-00-BR | KANE   | 164          | 158       |
| <b>CONTRACT NO. 63620</b>                       |                |        |              |           |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT |                |        |              |           |

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|---------------|----------|----|------|
| FINAL SURVEY  | SURVEYED | BY | DATE |
| NOTE BOOK     | PLOTTED  |    |      |
| AREAS CHECKED | TEMPLATE |    |      |
| NO.           |          |    |      |

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| ORIGINAL SURVEY | SURVEYED | BY | DATE |
| NOTE BOOK       | PLOTTED  |    |      |
| AREAS CHECKED   | TEMPLATE |    |      |
| NO.             |          |    |      |

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:11:34 AM  
 FILE NAME: 86090472-ss sheet.dgn  
 PLOT DRIVER: pdf.plt  
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| CHECKED -    | RGD       |
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| PLOT DATE =  | 7/26/2011 |

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**CITY OF AURORA**

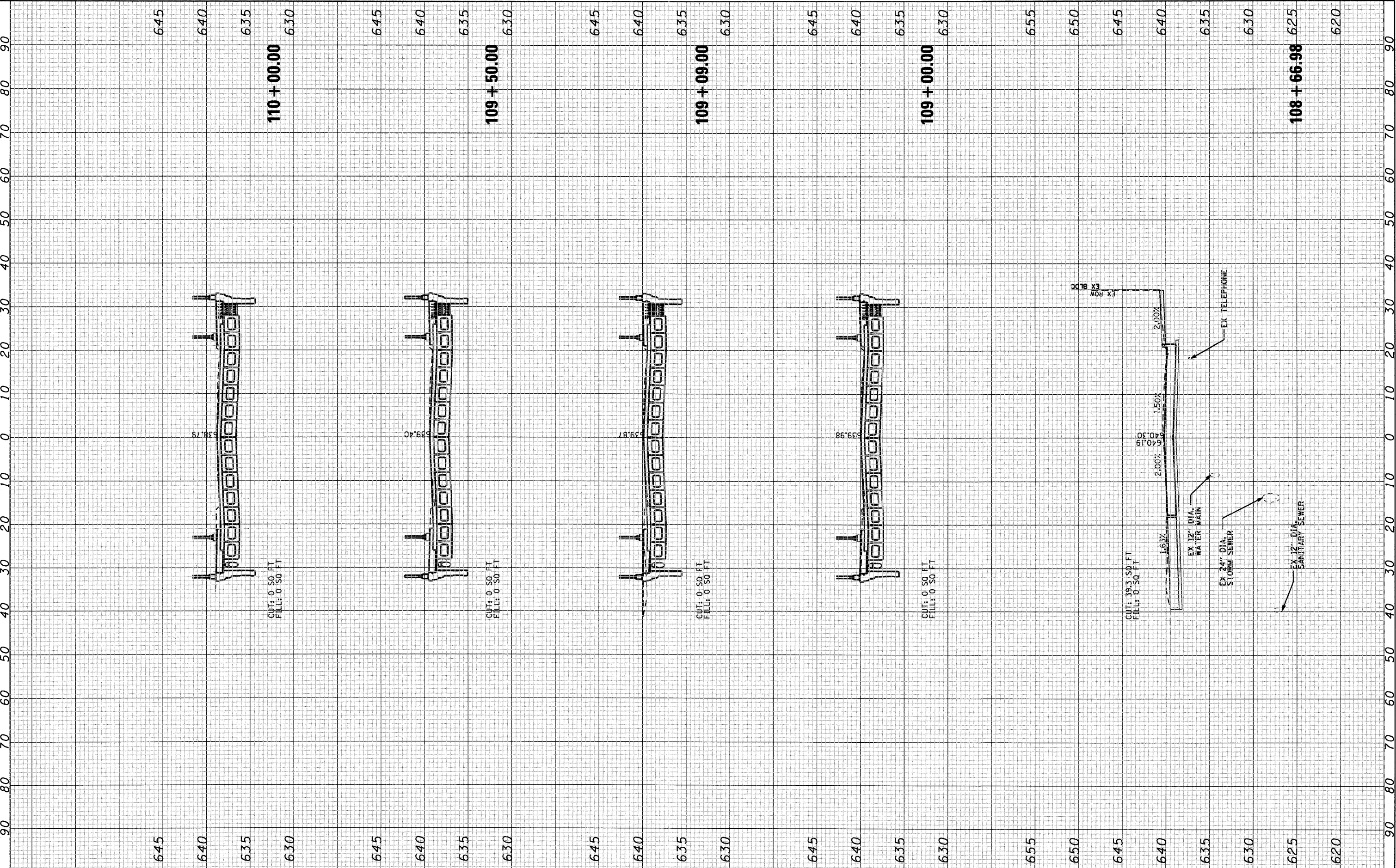
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DOWNER PLACE**  
 SCALE: 10H:5V    SHEET NO. 1 OF 6 SHEETS    STA. 106+50.00 TO STA. 108+50.00

|                           |                |        |              |           |
|---------------------------|----------------|--------|--------------|-----------|
| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|                           | 07-00264-00-BR | KANE   | 164          | 159       |
| CONTRACT NO. 63544        |                |        |              |           |
| ILLINOIS FED. AID PROJECT |                |        |              |           |

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| FINAL SURVEY NO. | SURVEYED PLOTTED       | BY | DATE |
| NOTE BOOK NO.    | TEMPLATE AREAS CHECKED |    |      |

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| ORIGINAL SURVEY NO. | SURVEYED PLOTTED       | BY | DATE |
| NOTE BOOK NO.       | TEMPLATE AREAS CHECKED |    |      |

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 DATE PLOTTED: 7/26/2011 10:12:36 AM  
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 PLOT DRIVER: pdf.plt  
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 #184-001022

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| CHECKED -   | RGD     |
| DATE -      | 7/26/11 |
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| REVISION -  |         |

**CITY OF AURORA**

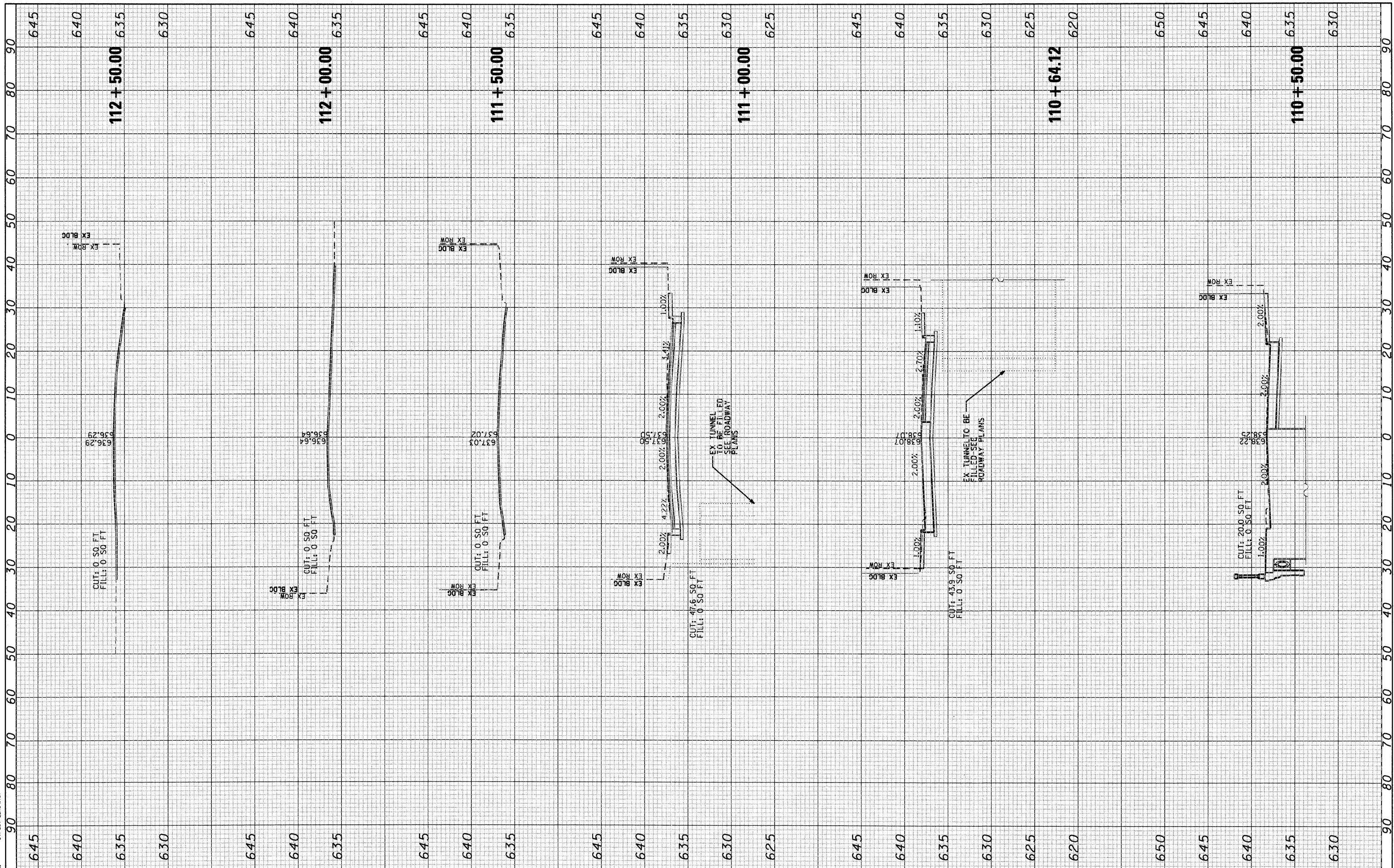
**CROSS SECTIONS  
DOWNER PLACE**  
 SCALE: 10H:5V    SHEET NO. 2 OF 6 SHEETS    STA. 108+66.98 TO STA. 110+00.00

|                             |                |        |                    |           |
|-----------------------------|----------------|--------|--------------------|-----------|
| F.A. RTE.                   | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|                             | 07-00264-00-BR | KANE   | 164                | 160       |
|                             |                |        | CONTRACT NO. 63544 |           |
| [ILLINOIS] FED. AID PROJECT |                |        |                    |           |

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| FINISH SURVEY | BY | DATE |
| SURVEY        |    |      |
| PLOTTED       |    |      |
| TEMPLATE      |    |      |
| NOTE BOOK     |    |      |
| AREAS CHECKED |    |      |
| NO.           |    |      |

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|-----------------|----|------|
| ORIGINAL SURVEY | BY | DATE |
| SURVEY          |    |      |
| PLOTTED         |    |      |
| TEMPLATE        |    |      |
| NOTE BOOK       |    |      |
| AREAS CHECKED   |    |      |
| NO.             |    |      |

COMPANY NAME: HRGreen  
 PROJECT: Aurora  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:12:19 AM  
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**CITY OF AURORA**

**CROSS SECTIONS  
DOWNER PLACE**

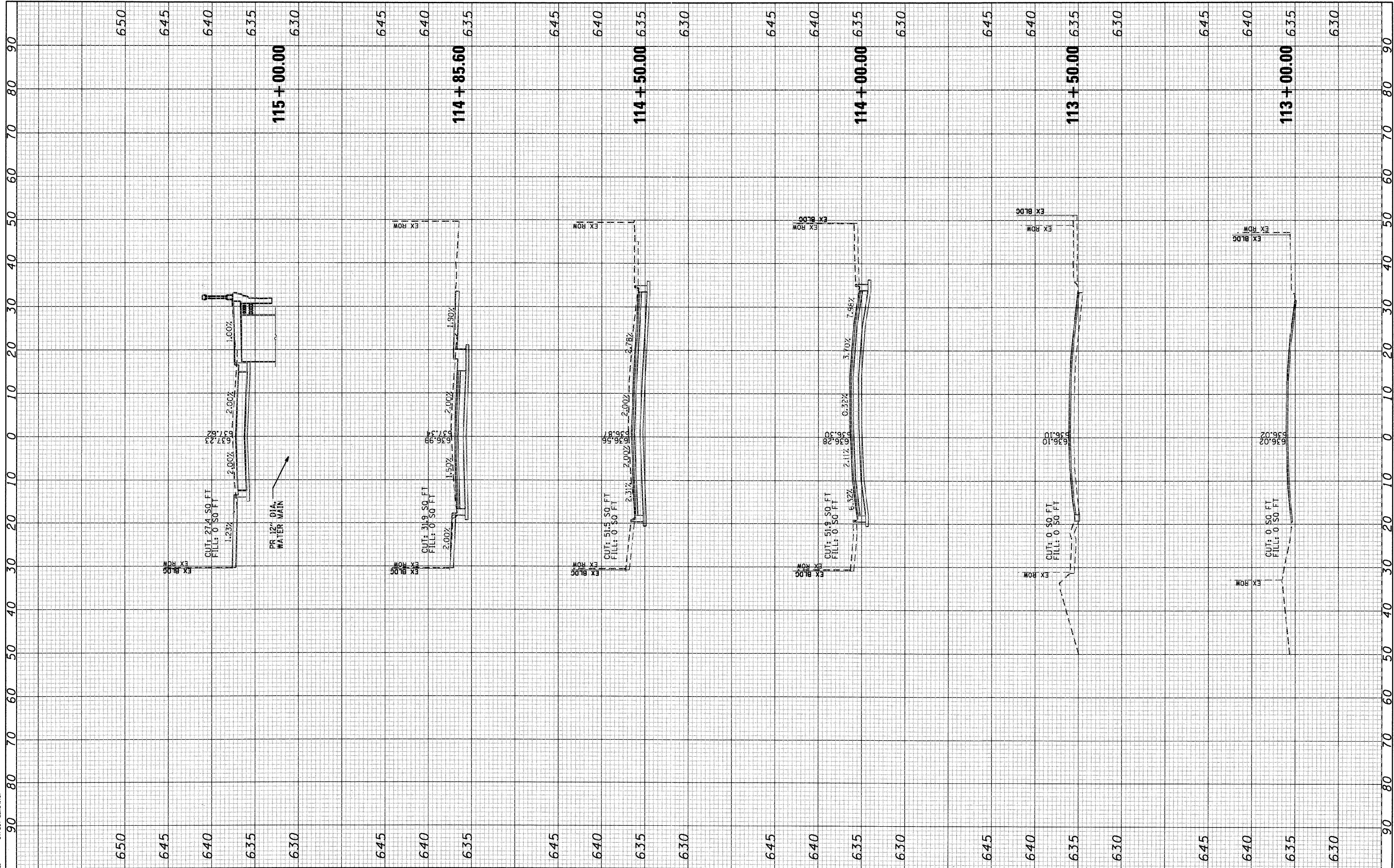
SCALE: 10H:5V    SHEET NO. 3 OF 6 SHEETS    STA. 110+50.00 TO STA. 112+50.00

|            |                |        |                           |           |
|------------|----------------|--------|---------------------------|-----------|
| F.A.R.T.E. | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|            | 07-00264-00-BR | KANE   | 164                       | 161       |
|            |                |        | CONTRACT NO. 63544        |           |
|            |                |        | ILLINOIS FED. AID PROJECT |           |

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|--------------|---------------|----|------|
| FINAL SURVEY | SURVEYED      | BY | DATE |
| SURVEY       | PLOTTED       |    |      |
| NOTE BOOK    | TEMPLATE      |    |      |
| NO.          | AREAS CHECKED |    |      |

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| ORIGINAL SURVEY | SURVEYED      | BY | DATE |
| NOTE BOOK       | PLOTTED       |    |      |
| NO.             | AREAS CHECKED |    |      |

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Christopher C. Harshbarger  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:11:41 AM  
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 PEN TABLE: Struct 22x34.tbl



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 #184-001322

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|                       | DATE - 7/26/11 | REVISED - |

**CITY OF AURORA**

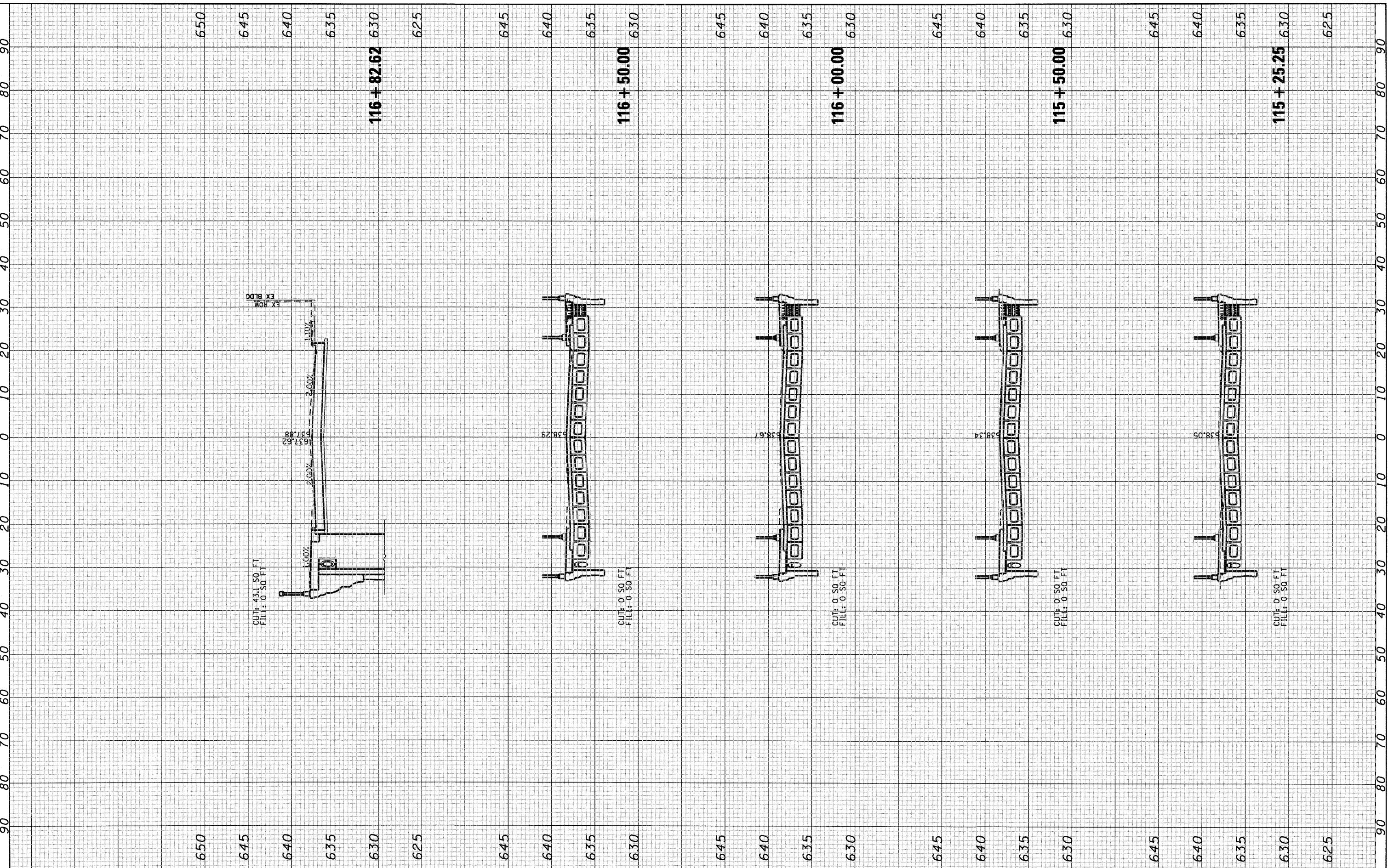
**CROSS SECTIONS  
DOWNER PLACE**  
 SCALE: 10H:5V    SHEET NO. 4 OF 6 SHEETS    STA. 113+00.00 TO STA. 115+00.00

|            |                |        |                             |           |
|------------|----------------|--------|-----------------------------|-----------|
| F.A.R.T.E. | SECTION        | COUNTY | TOTAL SHEETS                | SHEET NO. |
|            | 07-00264-00-BR | KANE   | 164                         | 162       |
|            |                |        | CONTRACT NO. 63544          |           |
|            |                |        | [ILLINOIS] FED. AID PROJECT |           |

|               |               |    |      |
|---------------|---------------|----|------|
| FINAL SURVEY  | SURVEYED      | BY | DATE |
| NOTE BOOK NO. | PLOTTED       |    |      |
|               | TEMPLATE      |    |      |
|               | AREAS CHECKED |    |      |
|               | AREAS CHECKED |    |      |

|                 |               |    |      |
|-----------------|---------------|----|------|
| ORIGINAL SURVEY | SURVEYED      | BY | DATE |
| NOTE BOOK NO.   | PLOTTED       |    |      |
|                 | TEMPLATE      |    |      |
|                 | AREAS CHECKED |    |      |
|                 | AREAS CHECKED |    |      |

COMPANY NAME: HRGREEN  
 PROJECT CONTACT: City of Aurora  
 DATE PLOTTED: 7/26/2011 11:14:44 AM  
 FILE NAME: 86090472-ss sheet.dgn  
 PLOT DRIVER: pdfplot  
 PEN TABLE: Struct 22x34.tbl



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 Illinois Professional Design Firm  
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|                       |                |           |
|-----------------------|----------------|-----------|
| USER NAME = whoad     | DESIGNED - JPG | REVISED - |
| PLOT SCALE = 10H:5V   | DRAWN - WJH    | REVISED - |
| PLOT DATE = 7/26/2011 | CHECKED - RGD  | REVISED - |
|                       | DATE - 7/26/11 | REVISED - |

**CITY OF AURORA**

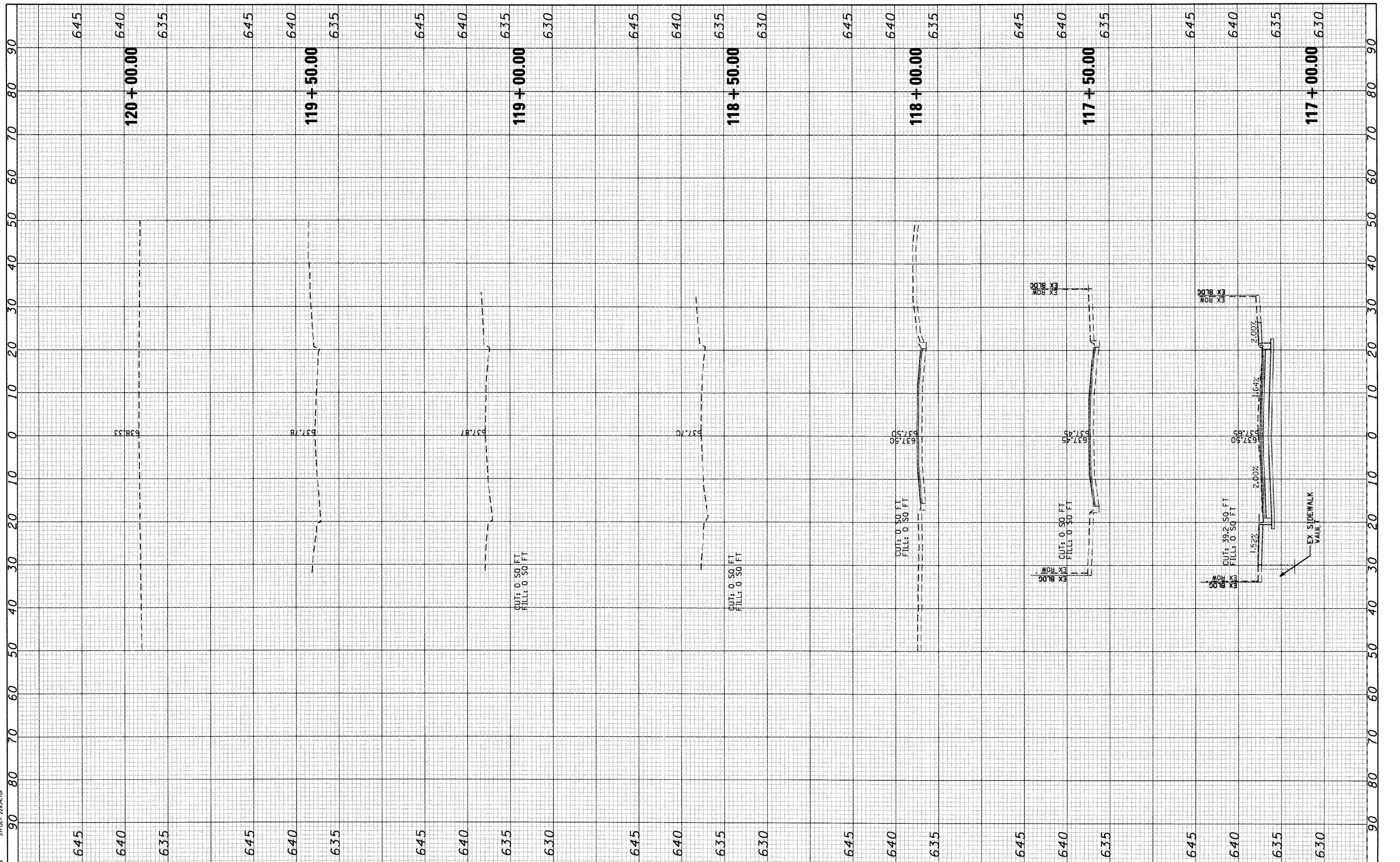
**CROSS SECTIONS  
DOWNER PLACE**  
 SCALE: 10H:5V    SHEET NO. 5 OF 6 SHEETS    STA. 115+25.25 TO STA. 116+82.62

| F.A. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO.          |
|---------------------------|----------------|--------|--------------|--------------------|
|                           | 07-00264-00-BR | KANE   | 164          | 163                |
|                           |                |        |              | CONTRACT NO. 63544 |
| ILLINOIS FED. AID PROJECT |                |        |              |                    |

|                  |               |    |      |
|------------------|---------------|----|------|
| FINAL SURVEY NO. | SURVEYED      | BY | DATE |
| NOTE BOOK NO.    | PLOTTED       |    |      |
|                  | TEMPLATE      |    |      |
|                  | AREAS CHECKED |    |      |

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|---------------------|---------------|----|------|
| ORIGINAL SURVEY NO. | SURVEYED      | BY | DATE |
| NOTE BOOK NO.       | PLOTTED       |    |      |
|                     | TEMPLATE      |    |      |
|                     | AREAS CHECKED |    |      |

COMPANY NAME: HRGreen  
 PROJECT CONTACT: Michael G. Harding  
 CLIENT: City of Aurora  
 DATE PLOTTED: 7/26/2011 10:46 AM  
 PLOT DRIVER: reggie@hrgreen.com  
 PEN TABLE: Struct 22x24.tbl



USER NAME = whood  
 PLOT SCALE = 10H:5V  
 PLOT DATE = 7/26/2011

DESIGNED - JPG  
 DRAWN - WJH  
 CHECKED - RGD  
 DATE - 7/26/11

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CITY OF AURORA

CROSS SECTIONS  
 DOWNER PLACE

SCALE: 10H:5V SHEET NO. 6 OF 6 SHEETS STA. 117+00.00 TO STA. 120+00.00

|                             |                |        |              |                    |
|-----------------------------|----------------|--------|--------------|--------------------|
| F.A. RTE.                   | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO.          |
|                             | 07-00264-00-BR | KANE   | 164          | 164                |
|                             |                |        |              | CONTRACT NO. 63544 |
| [ILLINOIS] FED. AID PROJECT |                |        |              |                    |