

# Aesthetic Bridges Visual Reference Library



A guide to  
precedent  
Iowa DOT  
aesthetic  
structures  
and special  
treatments

Prepared by the Bridges  
and Structures Bureau  
Methods Unit

IOWA | DOT



# Aesthetic Bridges Visual Reference Library

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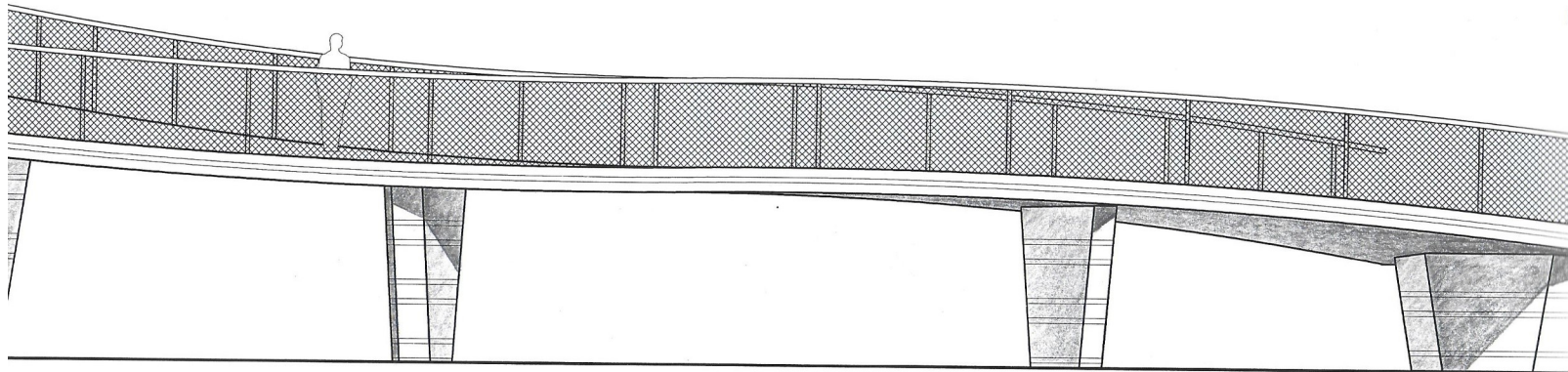
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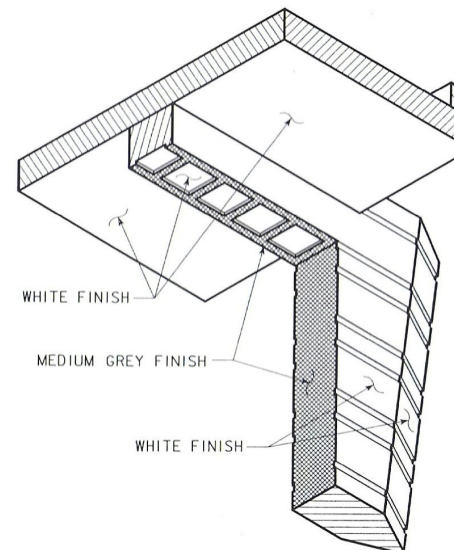
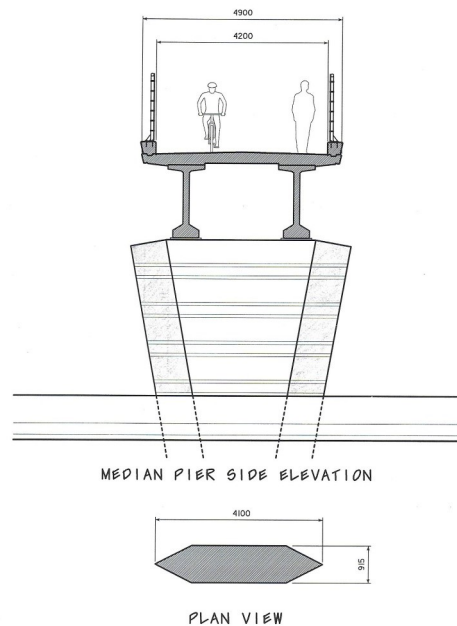
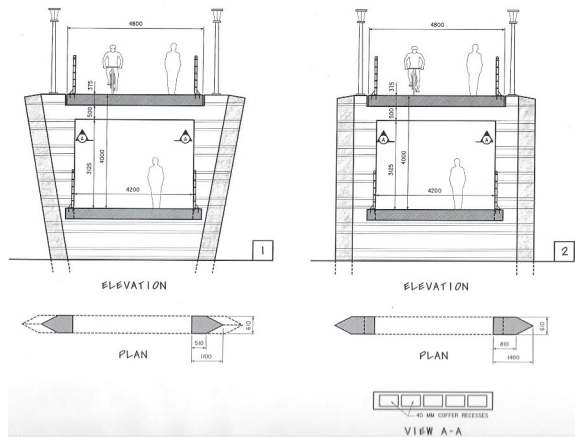


# Pedestrian Bridges: I-80 Overpass Trail Bridge, West Des Moines, IA

KMO



PART ELEVATION AT SPIRAL



PART AXONOMETRIC VIEW OF PIER NO. 8 AND SLAB

## Dallas County Design No. 200

- Project No. IM-080-3(197)121-13-25
- FHWA No. 608640
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-80 bridges + (various)
- Note: bridge was built as part of the 74th ST/ Jordan Creek Pkwy I-80 Interchange reconstruction and was designed to be architecturally compatible with the nearby vehicular bridge; trail is known as the "Mario Pedestrian Trail"
- Features:
  - Special pier shaping and rustication
  - Colored sealer coating
  - Vinyl coated chain link fence
  - Fence parapet
- Costs (2002):
  - Colored sealer coating \$21/SY (~\$20/SY avg bid)



# Pedestrian Bridges: I-80 Overpass Trail Bridge, West Des Moines, IA

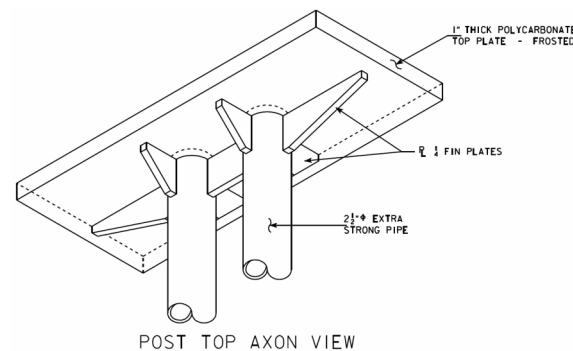
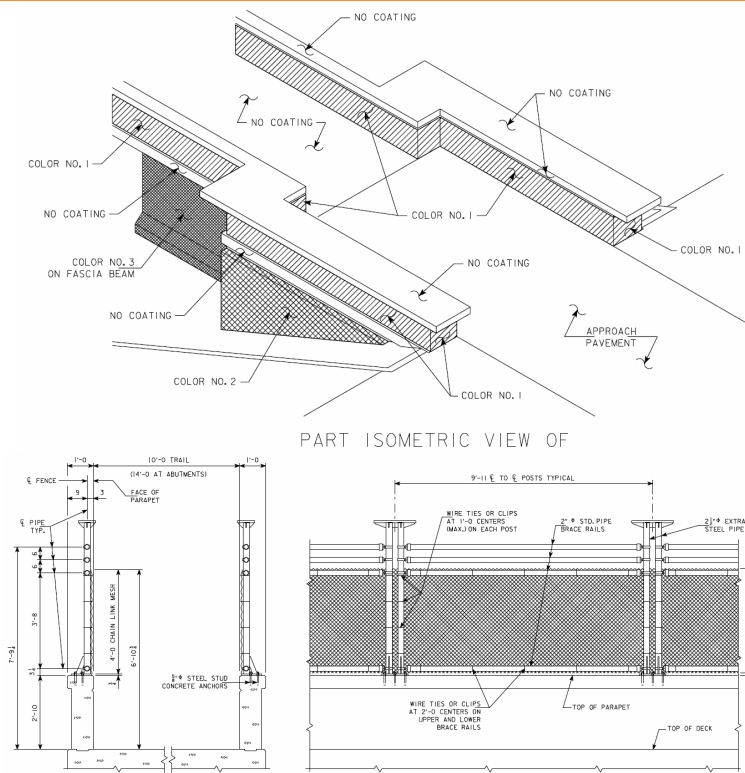
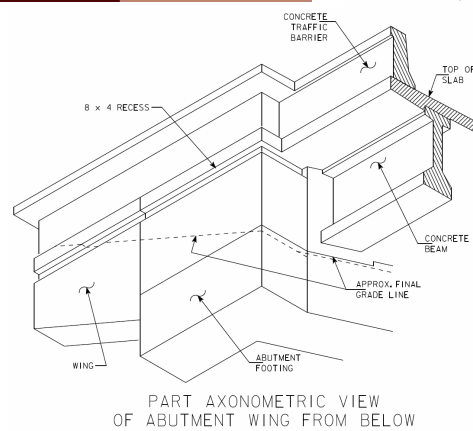
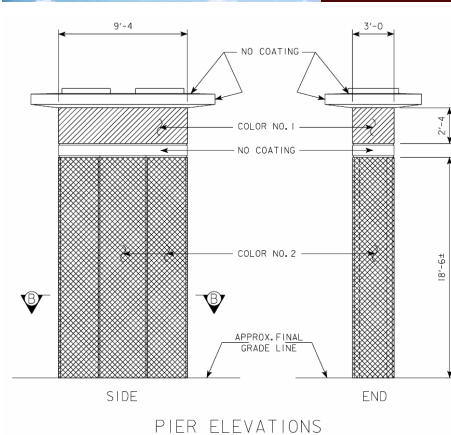
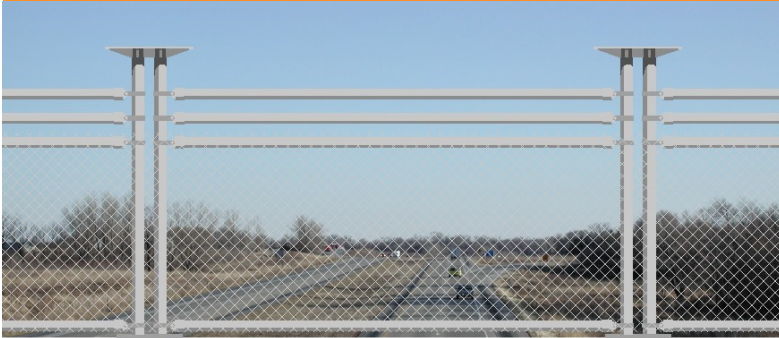
KMO





# Pedestrian Bridges: Cedar View Trail over US 34, Fairfield, IA

KMO



## Jefferson County Design No. 1703

- Project No. NHS-034-8(103)—3H-51
- FHWA No. 609805
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Fairfield Bypass US 34
- Note: bridge was built as part of US 34 Fairfield Bypass and was designed to be architecturally compatible with nearby vehicular bridges
- Features:
  - Special shaping at piers and abutments
  - Concrete rustication
  - Concrete coating (colored sealer)
  - Custom chain link fence design including 1.25x1.25 mesh and polycarbonate fence post caps
  - Fence parapet
  - Concrete pavers at landings (by County)
- Costs (2006):
  - Custom chain link fence \$86/LF (\$106/LF avg bid)
- Costs (2007):
  - Colored sealer (separate project) \$6/SY (\$13/SY avg bid)



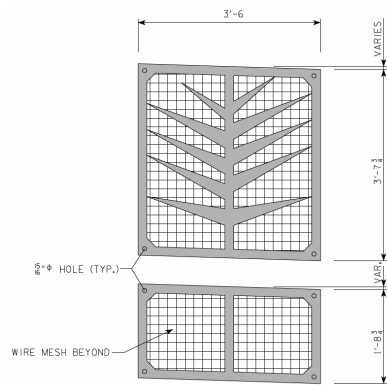
# Pedestrian Bridges: Cedar View Trail over US 34, Fairfield, IA

KMO

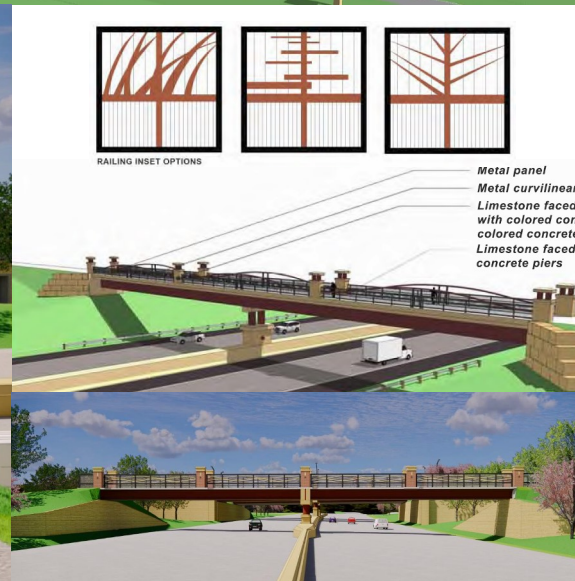
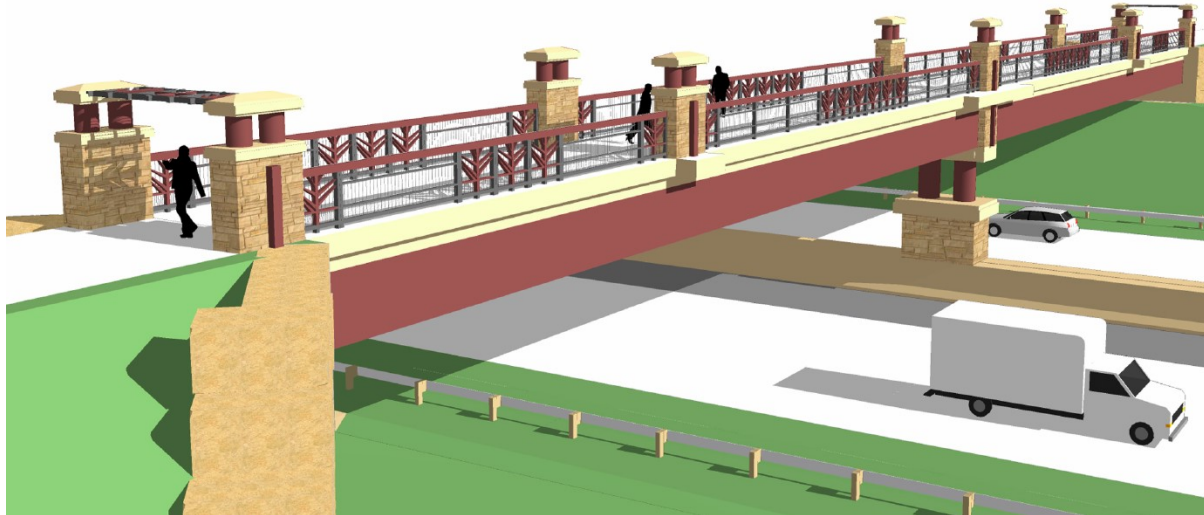




# Pedestrian Bridges: I-80 Overhead Trail Bridges, Coralville/Iowa City, IA



DECORATIVE PANEL DETAIL  
NOTE: ALL DECORATIVE PLATES SHALL BE 1/2" THICK



## Johnson Co. Design Nos. 514, 724

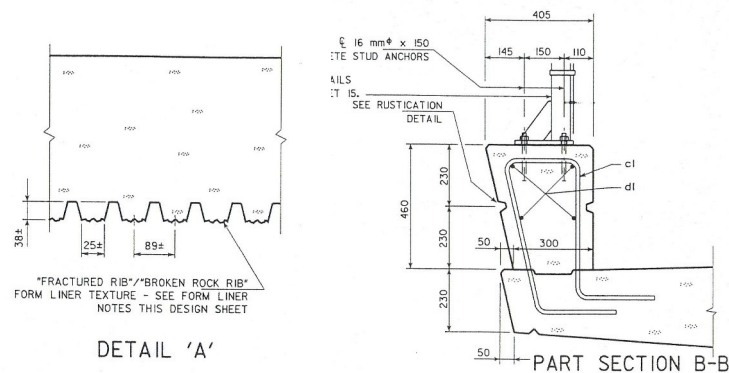
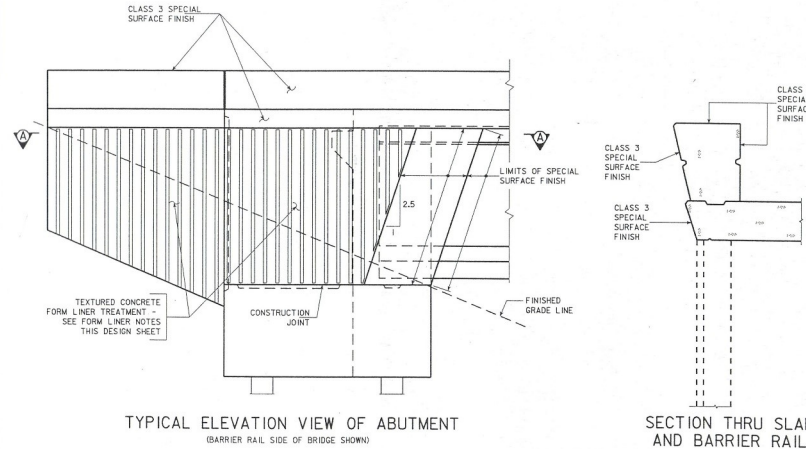
- Project Nos. IM-080-6(320)244-13-52, IM-080-6(489)243-13-52
- FHWA Nos. 700580, 605696
- Folder: W:\Highway\Bridge\MethodsSection\ Aesthetics\I-80 bridges + (various)
- Features:
  - Special pier and abutment shaping
  - Ornamental welded wire mesh fence
  - For liner concrete texture and rustication
  - Decorative columns
  - Integral thin veneer brick
  - Concrete coatings (colored sealer at Des. 514, mineral silicate paint at Des. 724)
- Costs:
  - Welded wire fence (2015) \$318/LF (\$337/LF avg)
  - Decorative columns (2015) \$7,550 ea (\$9,250 avg)
  - Colored sealer (2015) \$35/SY (\$43/SY avg bid)
  - Welded wire fence (2022) \$600/LF (\$682/LF avg)
  - Decorative columns (2022) \$18K ea (\$21K ea avg)
  - Mineral silicate (2022) \$48/SY (\$48/SY avg)



# Pedestrian Bridges: I-80 Overhead Trail Bridges, Coralville/Iowa City, IA







- Project No. NHS-218-2(75)–3H-44
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Mount Pleasant US 34 US 218
- 3D model (.dgn) available (pier and deck only)
- Features:
  - Special pier and abutment shaping
  - Form liner concrete texture at wingwalls
  - Fence parapet (sloped face)



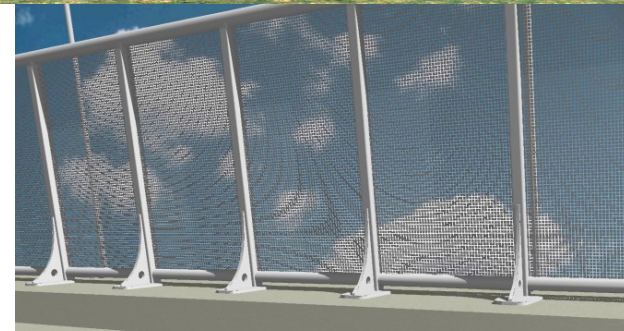
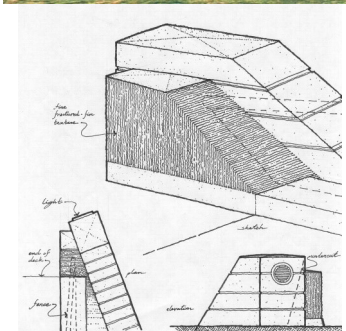
# Pedestrian Bridges: East Lake Park Trail over US 218, Mt. Pleasant, IA

KMO





# Pedestrian Bridges: I-235 Pedestrian Bridges, Des Moines, IA



## Polk County Design Nos. 203, 303, 204

- Project Nos. IM-235-2(327)9-13-77, IM-235-2(290)6-13-77, IM-235-2(291)6-13-77
- FHWA Nos. 042351, 608940, 042370
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-235 Corridor Des Moines
- Features:
  - Basket-handle, through-arch superstructure
  - High-performance fluoropolymer paint system
  - Custom welded wire mesh fence
  - Special abutment shaping
  - Form liner concrete texture and rustication
  - Commemorative bronze plaque
  - Special lighting (by City)
- Costs:
  - Wire mesh fence (2002) \$198/LF (\$213/LF avg bid)
  - Wire mesh fence (2004) \$229/LF (\$316/LF avg bid)



# Pedestrian Bridges: I-235 Pedestrian Bridges, Des Moines, IA



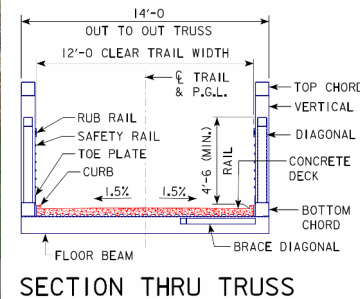
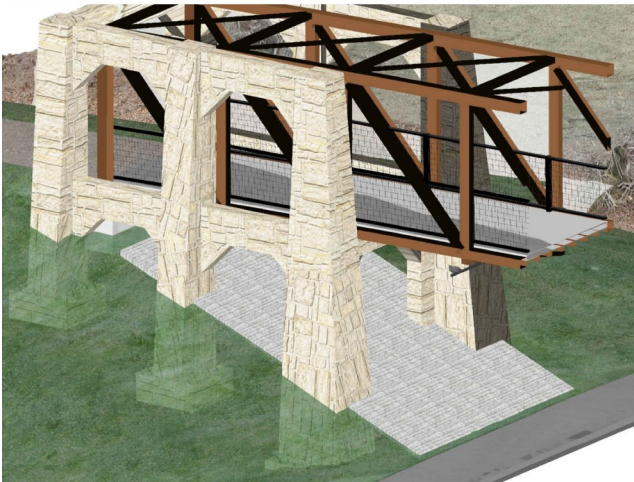
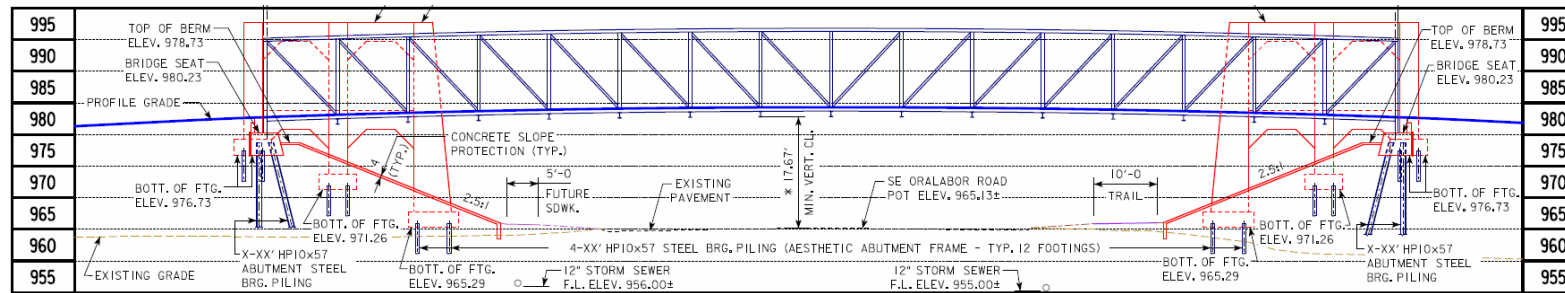


# Pedestrian Bridges: High Trestle Trail over IA 160, Ankeny, IA



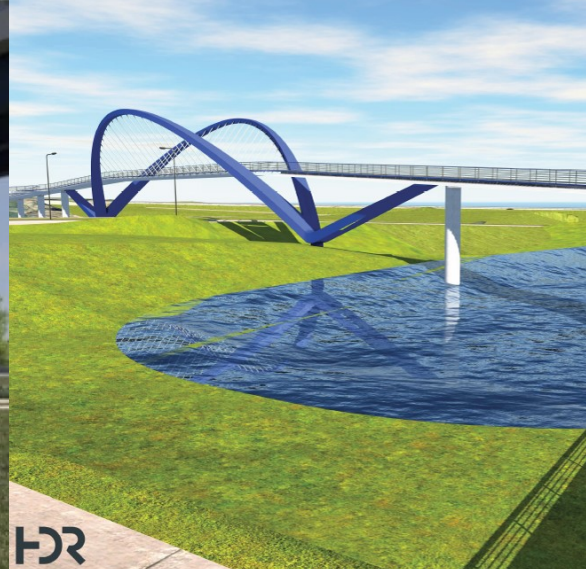
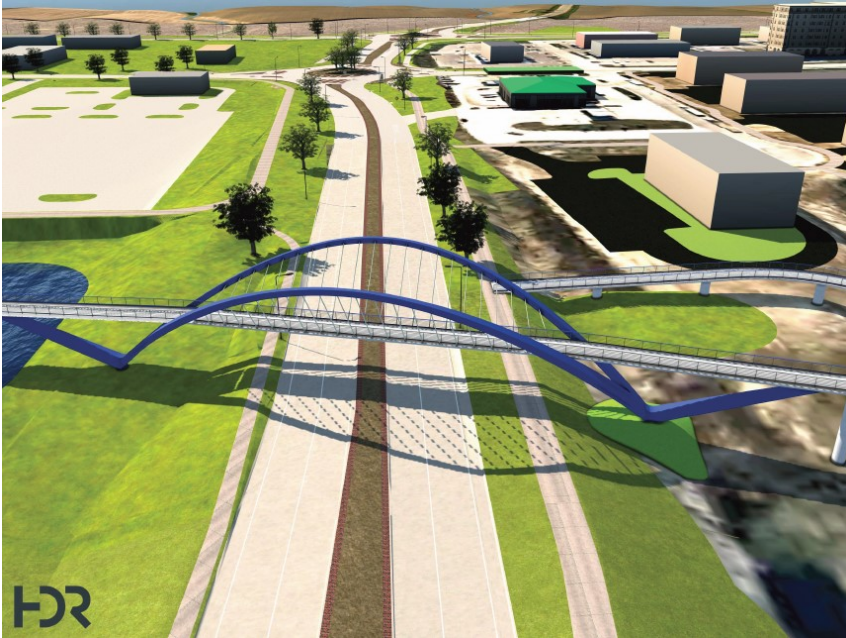
## Polk County Design No. 821

- Project No. TAP-T-0187(640)–8V-77
- Note: Local Systems project
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Ankeny (various)
- Features:
  - Pre-engineered weathering steel through-truss
  - Special abutment frame structures
  - Form liner concrete texture and rustication
  - Concrete coating (material type unknown)
- Costs (2021):
  - Total project cost \$3,044,526.55





# Pedestrian Bridges: Trail Bridge over Middle Road, Bettendorf, IA



## Scott County

- Project No. PW0580 (City of Bettendorf)
- Note: Local Systems project
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-80 Bridge + (various)
- Features:
  - Butterfly through-arch superstructure
  - Special pier forming and rustication
  - Custom perforated aluminum railing panels with galvanized steel rail and posts (separated by non-conductive material)
  - Concrete coating (mineral silicate paint)
  - Special lighting
- Costs (2025):
  - XXXXXXXXXXXXXXXXXXXX



# Pedestrian Bridges: Cedar Prairie Trail over IA 58, Cedar Falls, IA

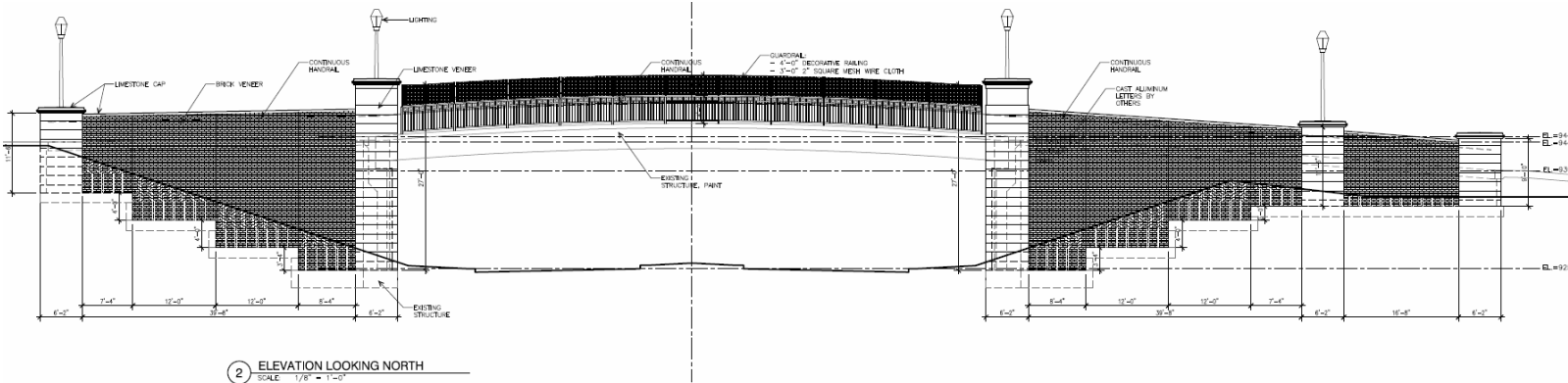


## Black Hawk County

- Project No. EDP-1185(644)–7Y-07
- Note: Local Systems project
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Cedar Falls (various)
- Features:
  - Continuous arched through-truss
  - Decorative abutment monuments with limestone veneer facing
  - Custom welded picket fence and railings
  - Concrete coating (colored sealer) at MSE walls
  - Special lighting
- Costs (2012):
  - Pre-engineered steel truss \$450,000 (\$525,000 avg bid)
  - Welded picket fence \$210/LF (\$244/LF avg bid)
  - Limestone facing \$4,108/CY (\$4,359/CY avg bid)
  - Colored sealer \$39.80/SY (\$40.87/SY avg bid)



# Pedestrian Bridges: Hudson Rd Trail over Hudson Rd, Cedar Falls, IA

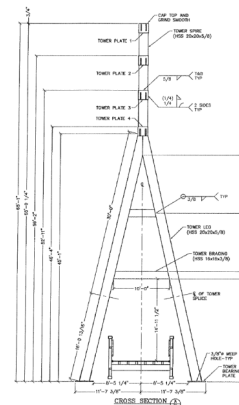
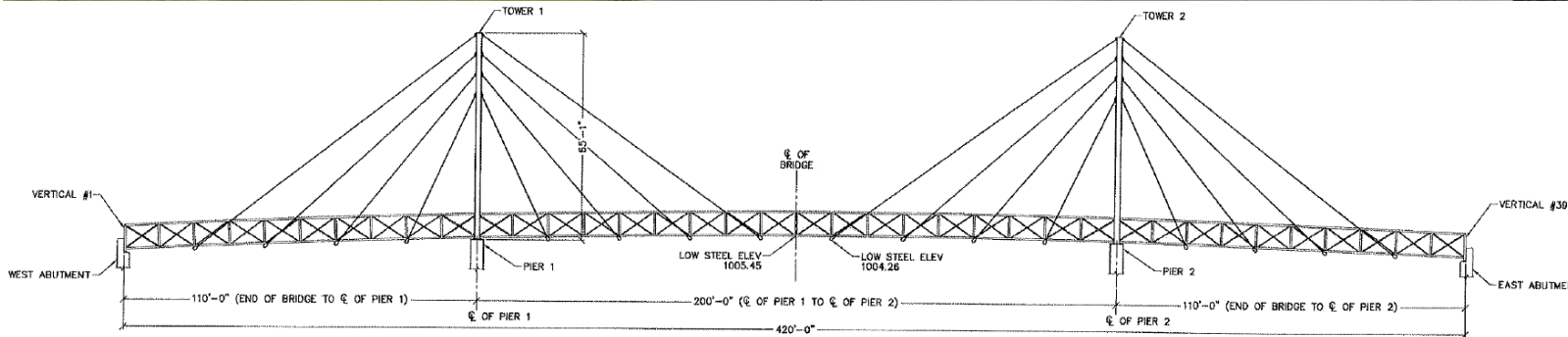


## Black Hawk County

- Project No. (unknown)
- Note: Local Systems project
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Cedar Falls (various)
- Features:
  - Modular brick abutment retaining walls
  - Cast stone monuments
  - Welded picket railing with welded wire mesh upper panels
  - Special lighting



# Pedestrian Bridges: Trail Bridge over Cedar River, Charles City, IA



## Floyd County

- Project No. (unknown)
- Note: Local Systems project
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Charles City Trail Bridge (local)
- Features:
  - Pre-engineered cable-stayed steel truss bridge
  - Stainless steel cable railing
  - Special lighting
- Costs (2010):
  - Total installation cost of pre-engineered bridge and railing, and approach trail work: \$721,361; does not include cost of pre-engineered bridge and railing

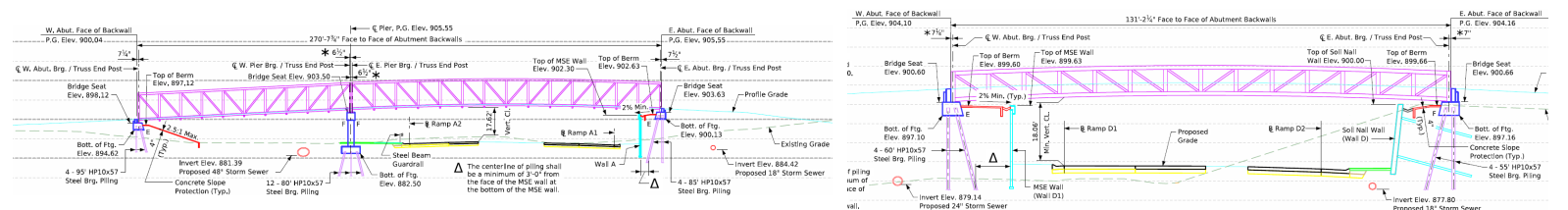


# Pedestrian Bridges: I-80 & Hickman Trail, Clive/Urbandale, IA



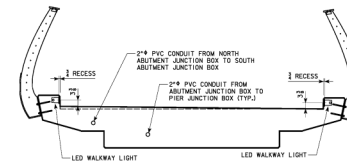
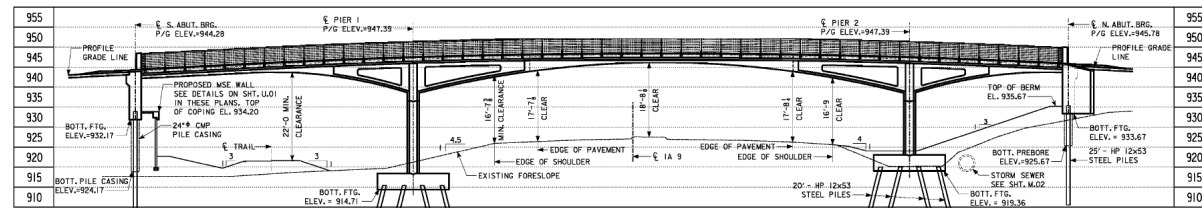
## Polk County Design Nos. 1825, 1925

- Project Nos. IMN-080-3(337)125—OE-77, IMN-080-3(338)125—OE-77
- Note: Local Systems project
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-80 bridges + (various)
- Features:
  - Pre-engineered steel truss bridges
  - Form liner concrete texturing at substructure
- Costs (2024):
  - Pre-engineered steel truss bridges \$360,000 and \$525,000 (\$424,100 and \$657,118 avg bids); cost is for bridges only - does not include foundations or approach trail work





# Pedestrian Bridges: Trout Run Trail over IA 9, Decorah, IA



## Winnishiek County

- Project No. STP-ES-(1867)609—81-96
- Note: Local Systems project
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Decorah (various)
- Features:
  - Post-tensioned open spandrel shallow arch superstructure
  - Cable railing
  - Concrete coating (colored sealer)
  - Special lighting with color-changing capability
- Costs (2011):
  - Post-tensioned tendons \$67/LF (\$72/LF avg bid)
  - Cable railing \$225/LF (\$242.50/LF avg bid)
  - Colored sealer \$17.90/SY (\$22/SY avg bid)
  - Lighting system \$68,900 (\$61,490 avg bid)



# Pedestrian Bridges: Principle River Walk Bridge, Des Moines, IA



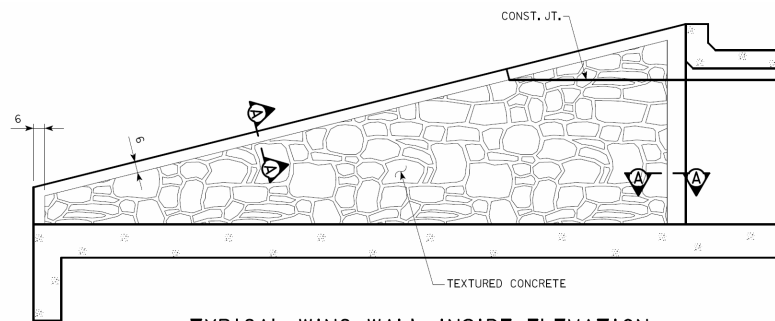
## Polk County

- Project No. EDP-1945(709)–7Y-77
- Note: Local Systems project
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Des Moines Center ST Pedbridge (local)
- Features:
  - Steel arch twin deck superstructure
  - Cross-tie walkway with non-skid glass panel floor (original; retro-fitted with steel flooring)
  - Stainless steel cable railing
  - Non-skid walking surface (applied to steel box)
  - Special lighting
- Costs (2007):
  - Cable railing \$306/LF (\$315.50/LF avg bid)
  - Non-skid glass panel \$360/SF (\$290/SF avg bid)
  - Non-skid surface \$1.30/SF (\$3.15/SF avg bid)
  - Lighting system \$565,000 (\$570,000 avg bid)



# Pedestrian Tunnels: Basic Aesthetic Tunnel Headwall Examples

KMO





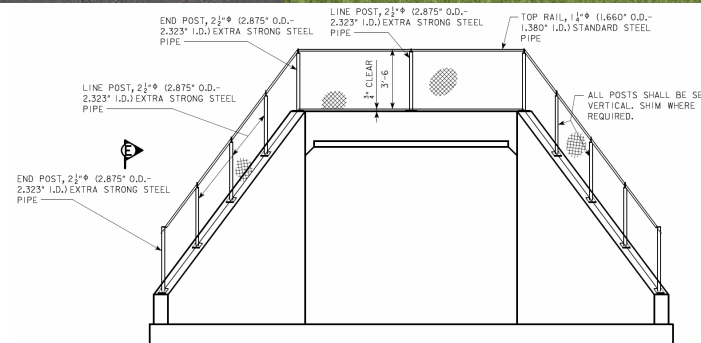
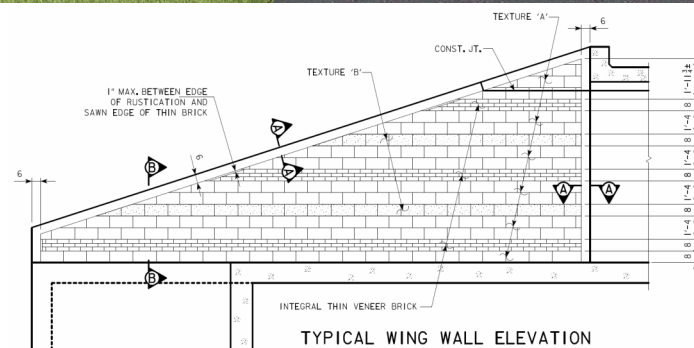
# Pedestrian Tunnels: Trail Tunnel under Covington Rd, Cedar Rapids, IA

KMO



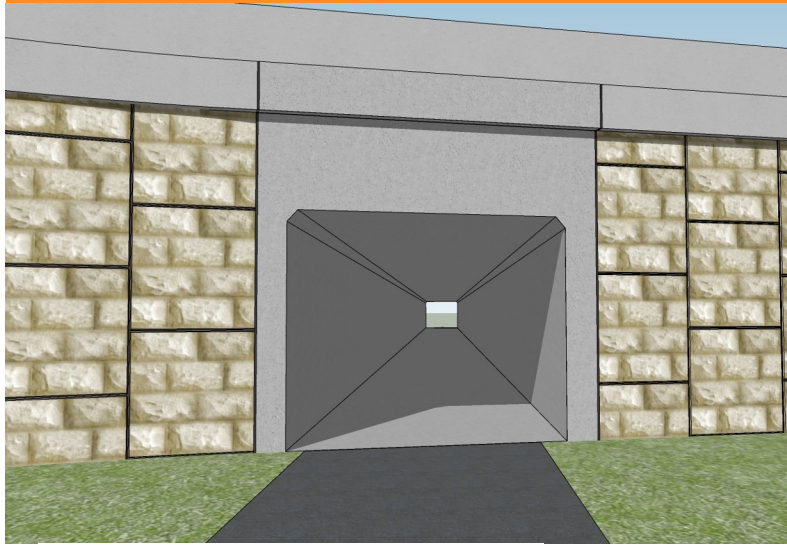
## Linn County Design No. 614

- Project No. NHSX-100-1(42)—3H-57
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Cedar Rapids IA 100 Corridor\Covington Trail RCB
- 3D model (.skp) available
- Features:
  - Form liner concrete texture and rustication
  - Integral thin veneer brick
  - Vinyl coated chain link fence
- Costs (2014):
  - Thin veneer brick 25/SF (\$41.50/SF avg bid)
  - Chain link fence \$55/LF (\$42.50/LF avg bid)



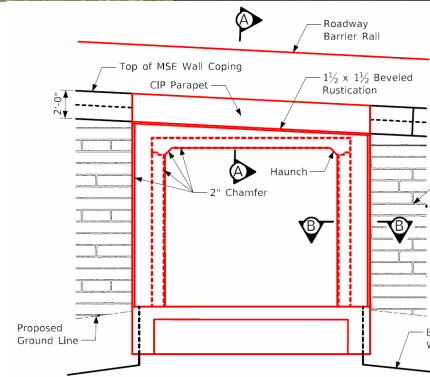


# Pedestrian Tunnels: 1st Street DDI Tunnels, Coralville, IA

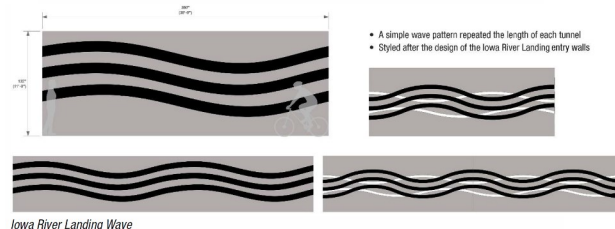
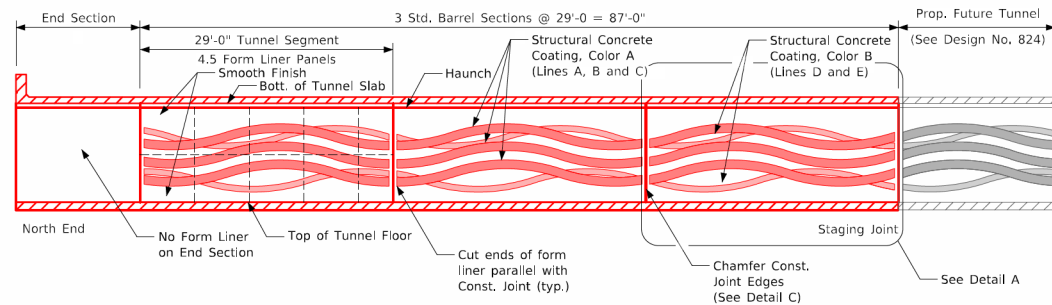


## Johnson County Design Nos. 824, 924, 1024, 1124

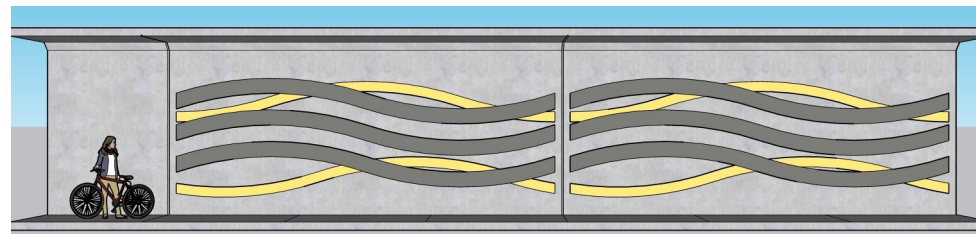
- Project No. IM-080-6(495)243-13-52
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-80 bridges + (various) \Coralville+IowaCity
- 3D model (.skp) available
- Features:
  - Non-standard headwalls for MSE walls
  - Extended parapet as retaining wall for roadway
  - Concrete rustication inside barrel
  - Concrete coating (100% acrylic paint)
  - Anti-graffiti coating
  - Special lighting (by City)
- Costs (2022):
  - Concrete coating \$48/SY (\$48/SY avg bid)
  - Anti-graffiti coating \$22/SY (\$22.54/SY avg bid)



Headwall Elevation View  
Perpendicular to Headwall



Iowa River Landing Wave





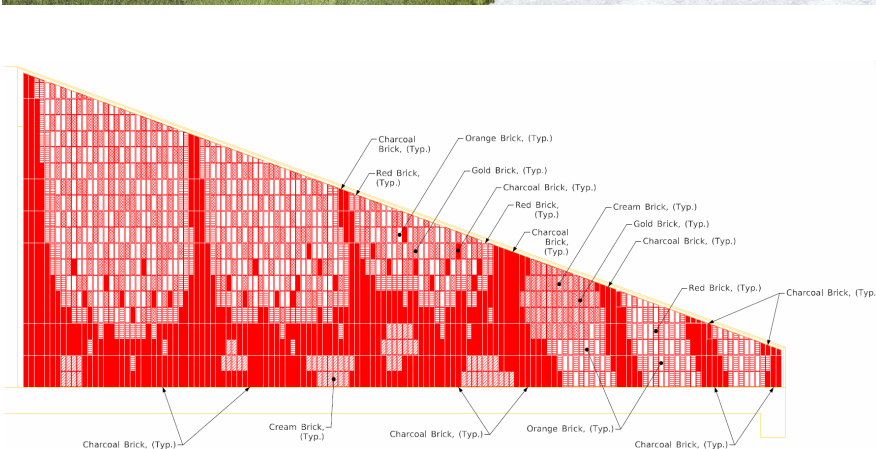
# Pedestrian Tunnels: HOINT Tunnel under I-35, Huxley, IA

KMO



## Story County Design No. 423

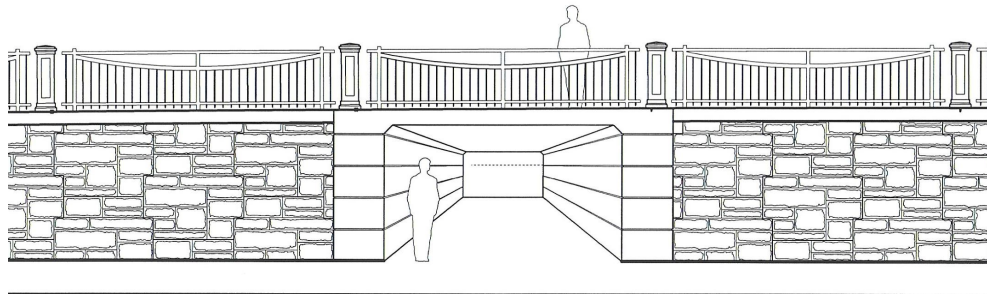
- Project No. IM-NHS-035-4(268)104-03-85
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-35 Ankeny to Ames
- 3D model (.skp) available
- Features:
  - Integral thin veneer brick depicting Monarch butterfly wing pattern
  - Concrete coating on barrel interior (100% acrylic)
  - Vinyl coated chain link headwall fence
  - Anti-graffiti coating
  - Lighting (by others)
- Costs (2024):
  - Thin veneer brick \$125/SF (\$125/SF avg bid)
  - Concrete coating \$35/SY (\$35/SY avg bid)
  - Vinyl chain link fence \$68/LF (\$71.34 avg bid)
  - Anti-graffiti coating \$25.80/SY (\$25.80/SY avg bid)





# Pedestrian Tunnels: Tunnel under US 71 Causeway, Okoboji, IA

KMO



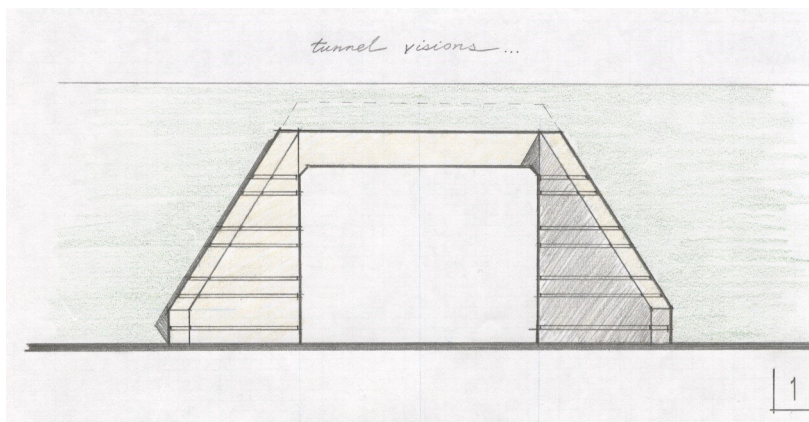
## Dickinson County Design No. 296

- Project No. NHSX-71-9(38)-3H-30
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Okoboji US 71
- Features:
  - Non-standard headwall for MSE wall
  - Concrete rustication including through barrel
  - Concrete coating (cementitious acrylic paint coating used as Class 3 Special Surface Finish in accordance with the Standard Specifications; technique later abandoned due to failures)
  - White cement concrete barriers, custom welded picket railings and cast stone bollards attached directly to RCB slab (roadway surface)
  - Lighting (by others)
  - Mural painting added in 2020 (by others)



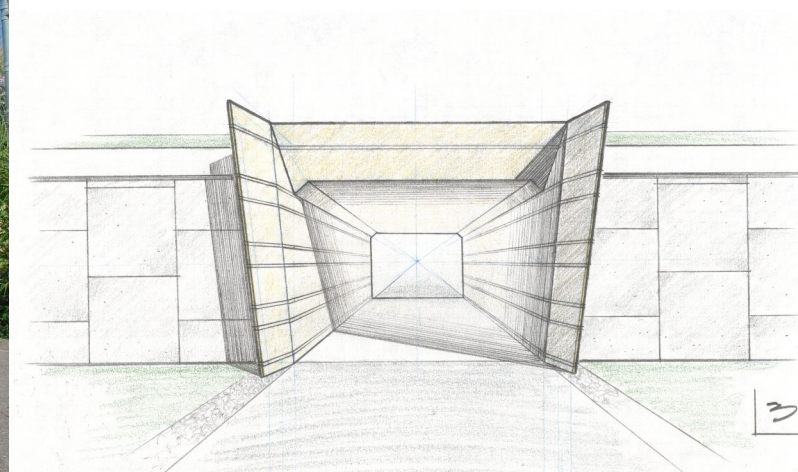
# Pedestrian Tunnels: Douglas Ave Trail Tunnels at I-80, Urbandale, IA

KMO



## Polk County Design Nos. 1602, 1802

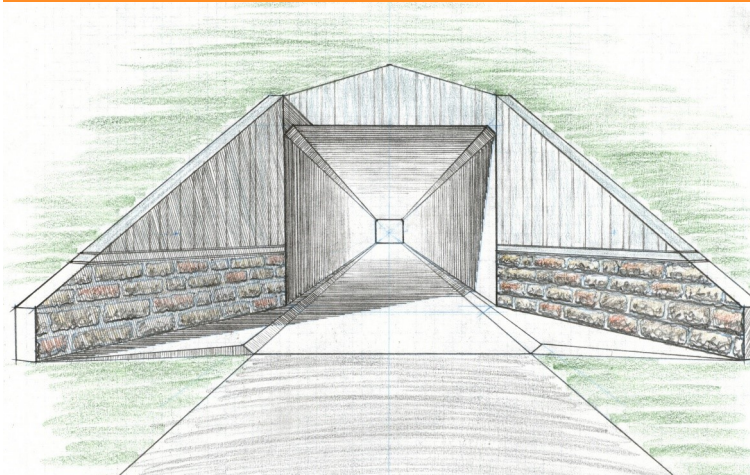
- Project Nos. IM-035-2(306)76-13-77, IM-035-2(269)76-13-77
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-80 bridges + (various)\Douglas Ave
- Features:
  - Special headwall shaping at MSE wall portal
  - Concrete rustication incl. inside tunnel barrels
  - Concrete coating (colored sealer)
- Costs (2002):
  - Colored sealer coating \$14/SY (\$13/SY avg)





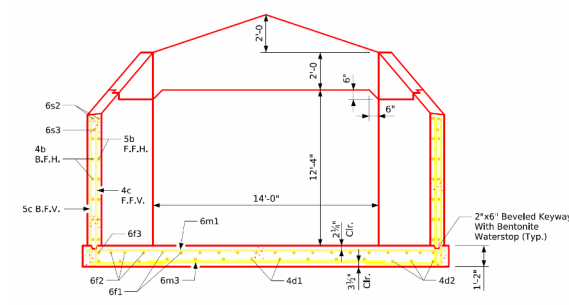
# Pedestrian Tunnels: Living History Farm I-80 Tunnel, Urbandale, IA

KMO

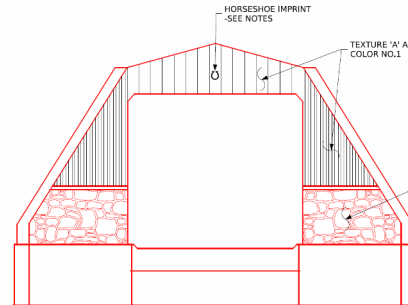


## Polk County Design Nos. 2002 and 1125

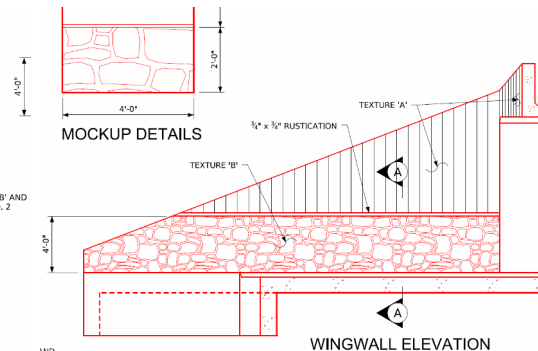
- Project Nos. IM-035-2(306)76-13-77, IM-080-3(268)126-13-77
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-80 bridge + (various)\Hickman DDI
- 3D model (.skp) available
- Features:
  - Special parapet shaping
  - Form liner texture and rustication
  - Concrete coating (colored sealer coating in 2002; mineral silicate paint in 2024 extension project)
  - Horseshoe impression at headwalls
- Costs:
  - Colored sealer coating (2002) \$14/SY (\$13/SY avg)
  - Mineral paint (2024) \$210/SY (\$199/SY avg bid)



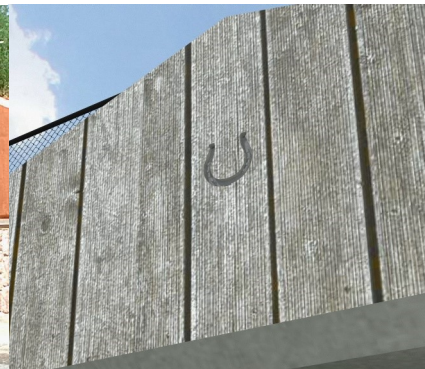
Typical Section - Near Center of Apron



HEADWALL AND ELEVATION

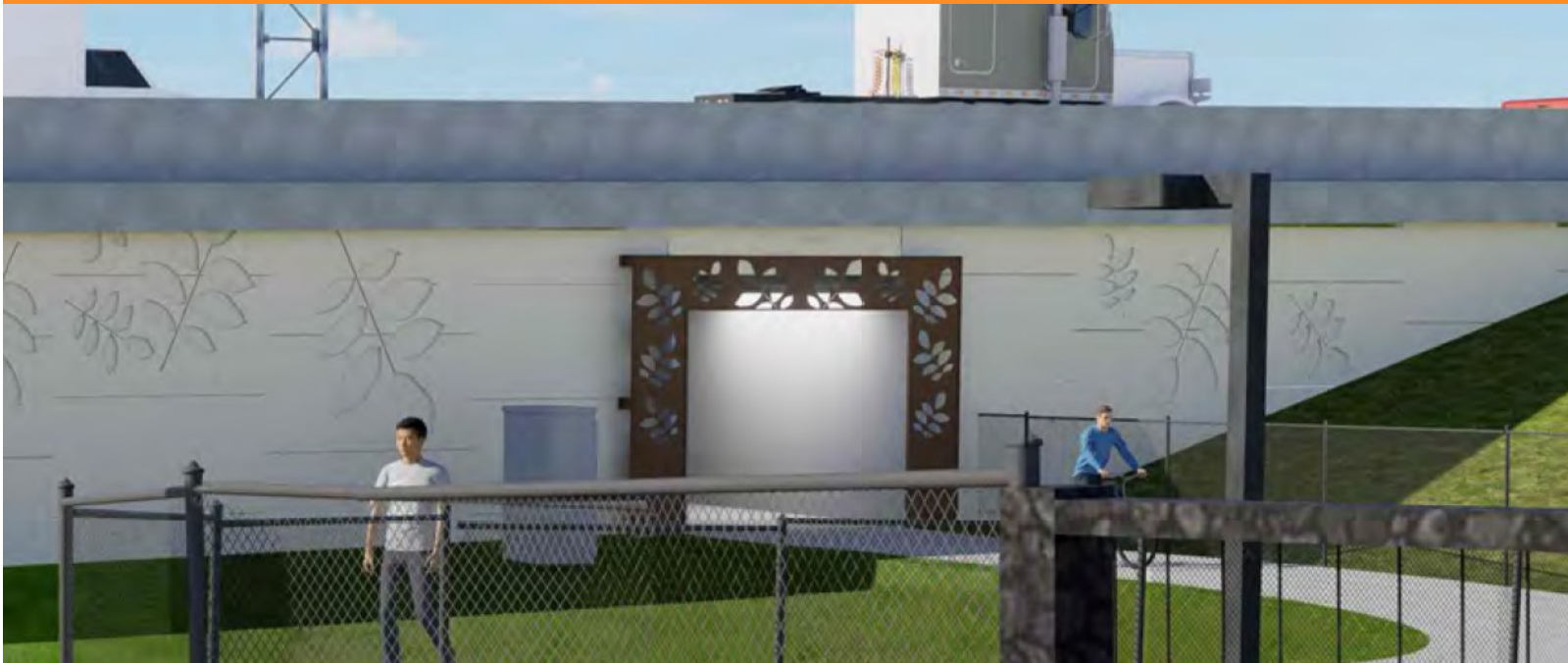


WINGWALL ELEVATION



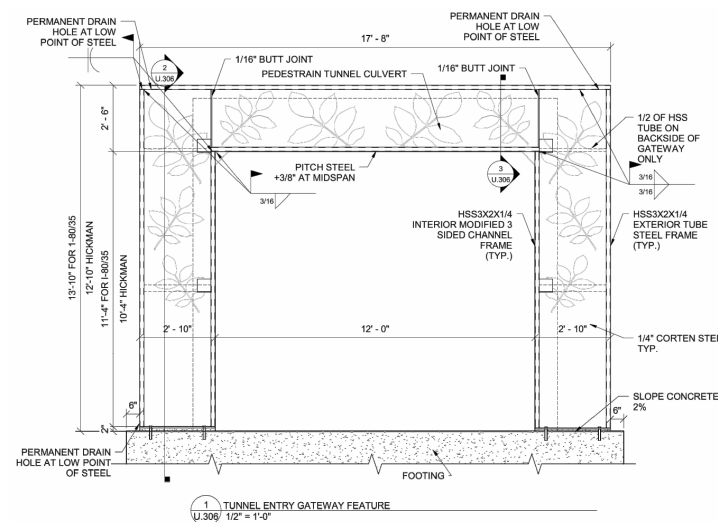
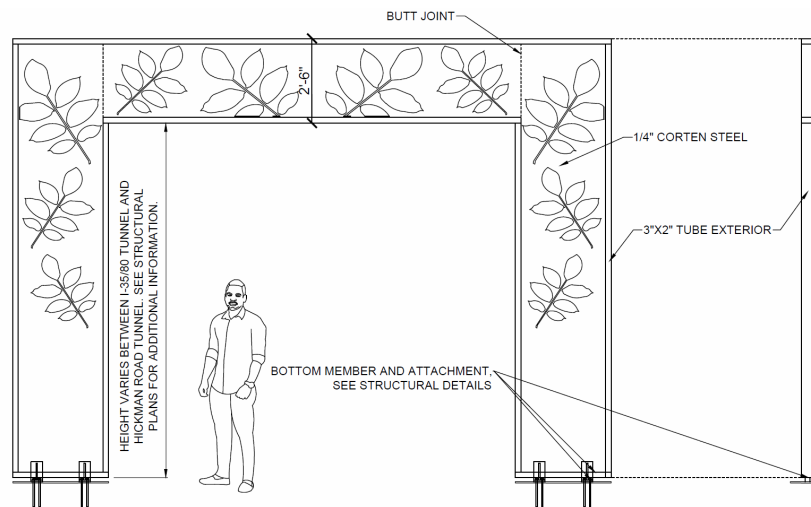


# Pedestrian Tunnels: Hickman Trail Tunnel under I-80, Urbandale, IA



## Polk County Design Nos. 1325, 1425

- Project No. IMN-080-3(339)125-OE-77
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-80 bridges + (various)\Hickman DDI
- Features:
  - Non-standard headwall at MSE wall
  - Decorative weathering steel applique
  - Special lighting (by City)





# Pedestrian Tunnels: Trail Tunnel under US 63, Waterloo, IA

KMO



## Black Hawk County Design No. 1015

- Project No. NHSX-063-6(92)—3H-07
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Waterloo (various)\US 63 over RR
- 3D model (.skp) available
- Features:
  - Non-standard headwalls for MSE wall
  - Concrete coating (colored sealer)
  - Anti-graffiti coating (barrel and headwalls)
  - Special lighting (by City)
- Costs (2017):
  - Colored sealer \$60/SY (single bidder)
  - Anti-graffiti coating \$22.75/SY (single bidder)



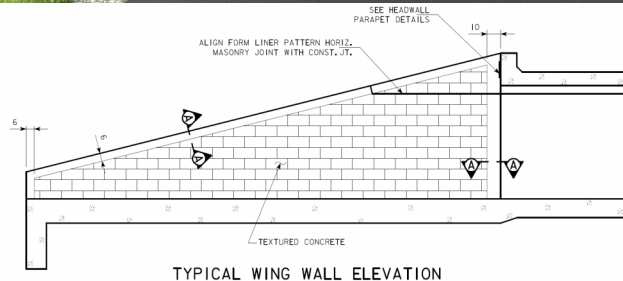
# Pedestrian Tunnels: Hoover Trail under I-80, West Branch, IA

KMO

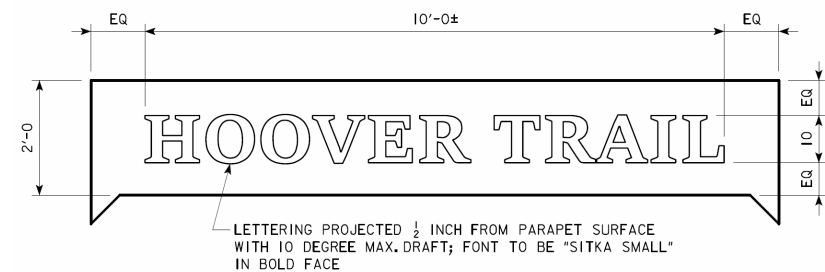


## Cedar County Design No. 121

- Project No. IM-NHS-7(155)255-03-16
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-80 bridge + (various)\West Branch Tunnel
- 3D model (.skp) available
- Features:
  - Form liner concrete texture and rustication
  - Welded picket headwall railing (powder coated)
  - Projected lettering on parapets
  - Concrete coating (mineral silicate at headwall texture, 100% acrylic paint inside barrel)
  - Anti-graffiti coating
- Costs (2023):
  - Welded picket railing \$300/LF (\$300/LF avg bid)
  - Concrete coating \$44.25/SY (\$44.25/SY avg bid)
  - Anti-graffiti coating \$27/SY (\$27/SY avg bid)



TYPICAL WING WALL ELEVATION





# Retaining Walls: US 52 MSE Wall at I.C.E.R.R., Bellevue, IA

KMO



## Jackson County

- Project No. BRF-052-1(82)—38-49
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Bellevue US 52
- Note: Supports abutment of US 52 bridge over I.C.E.R.R. and Mill Creek, FHWA No. 609770 [Jackson Co. Design No. 108, BRF-052-1(70)—38-49]
- 3D model (.skp) available (see bridge model)
- Features:
  - Supports S. Abutment of US 52 bridge
  - Nominal 5' x 5' MSE panels (plan requirement)
  - Integrally colored and textured MSE panels
  - OSHA pipe railing on CIP coping
- Costs (2008):
  - MSE wall \$54.94/SF (\$53.19/SF avg bid)
  - Steel pipe railing \$75.46/LF (\$80.09/LF avg bid)



# Retaining Walls: IA 58/Viking Rd Soldier Pile Walls, Cedar Falls, IA



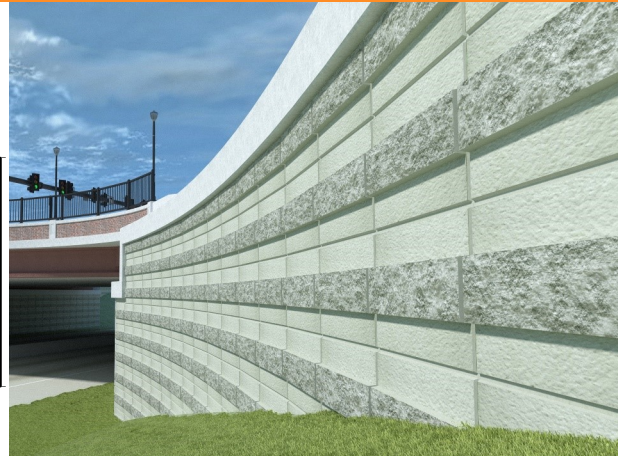
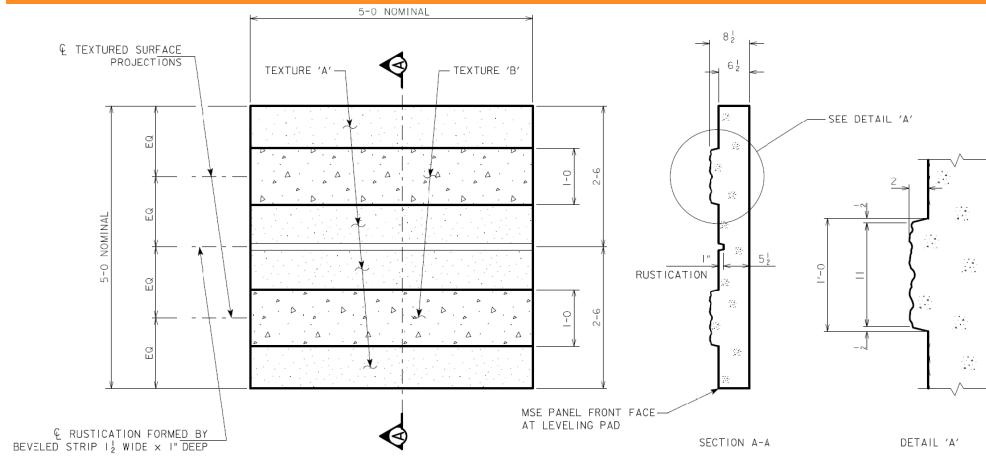
## Black Hawk County Design No. 417

- Project No. NHSX-058-1(95)—3H-07
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Cedar Falls (various)
- Features:
  - Supports abutments of Viking Rd bridge (Black Hawk Co. Design No. 317, NHSX-058-1(94)—3H-07)
  - Soldier pile wall with CIP concrete facing
  - Form liner textured concrete
  - Multiple alternating textures
  - Concrete coating (mineral silicate paint)
- Costs (2018):
  - Aesthetic wall facing \$111/SY (\$77/SY avg bid)
  - Concrete coating \$45/SY (\$43.70/SY avg bid)



# Retaining Walls: IA 100 Corridor MSE Walls, Cedar Rapids, IA

K/M/O



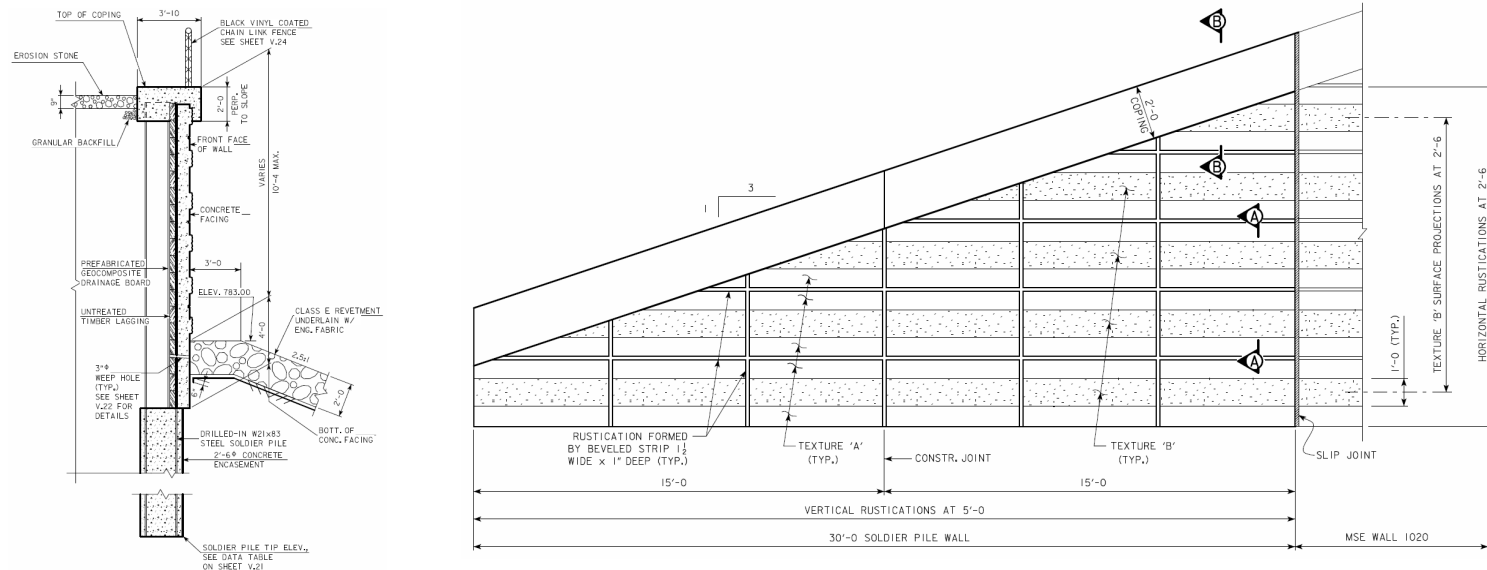
## Linn County

- Project Nos. NHSX-100-1(79)–3H-57, NHSX-100-1(77)–3H-57, NHSX-100-1(39)–3H-57
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Cedar Rapids IA 100 Corridor
- 3D model (.skp) available (see Edgewood Rd NE bridge over IA 100, Linn Co. Design No. 514, NHSX-100-1(66)–3H-57)
- Features:
  - Supports abutments of Edgewood Rd NE bridge over IA 100, IA 100 bridge over Ushers Ferry Rd, and several ramp bridges at IA 100 & US 30 Interchange
  - Nominal 5' x 5' and 10' x 5' MSE panels (plan requirement; varied by project)
  - Integrally colored and textured MSE panels
  - Panels include textured segments projected 2 inches from surrounding textured surfaces
- Costs (2014):
  - MSE wall \$30.35/SF (\$31.93/SF avg bid)
- Costs (2016):
  - MSE wall \$29.85/SF (\$31.31/SF avg bid)



# Retaining Walls: IA 100 Soldier Pile Wall, Cedar Rapids, IA

KMO



## Linn County Design No. 1414

- Project No. NHSX-100-1(77)—3H-57
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Cedar Rapids IA 100 Corridor
- 3D model (.skp) available (see IA 100 bridge over Ushers Ferry Rd)
- Features:
  - Supports abutment foreslope of IA 100 WB bridge over Ushers Ferry Rd (Linn Co. Design No. 1214, NHSX-100-1(65)—3H-57)
  - Soldier pile wall with CIP fascia
  - Integrally colored and textured CIP concrete aesthetic facing (see Special Provisions)
  - Form liner texture and rustication to match adjacent MSE retaining wall panels
  - Chain link fence on CIP coping





# Retaining Walls: US 30 EB Ramp CIP Wall, Cedar Rapids, IA

KMO



## Linn County Design No. 109

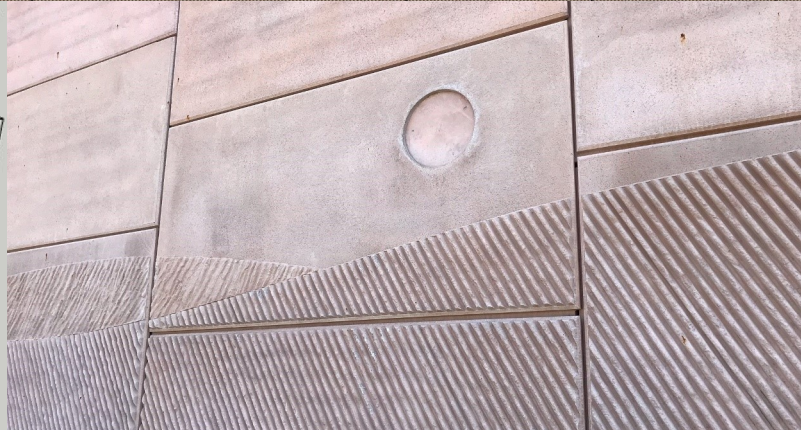
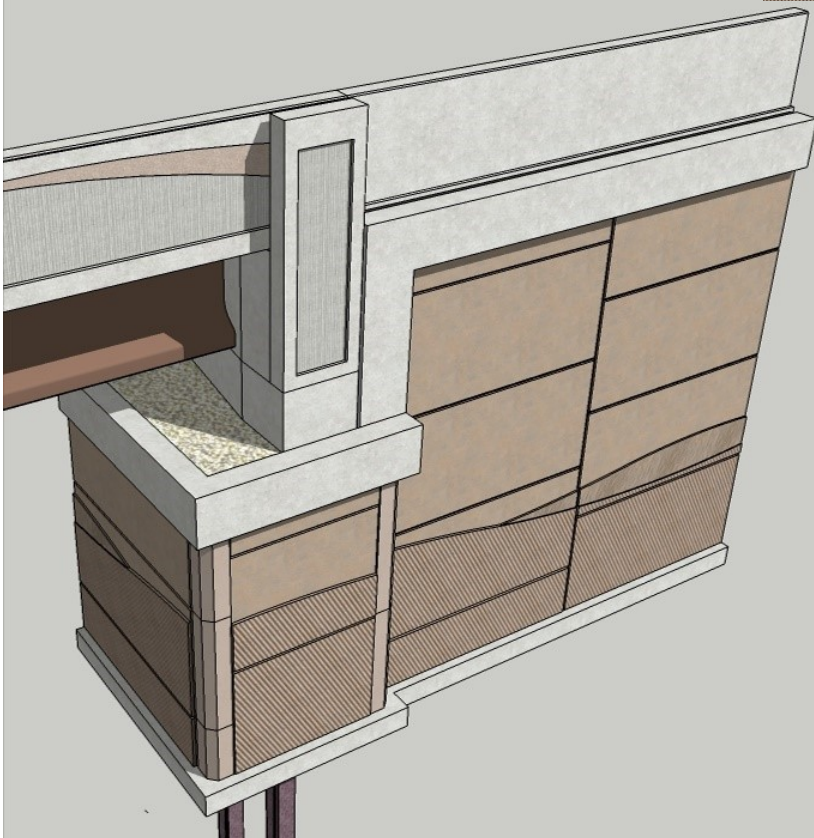
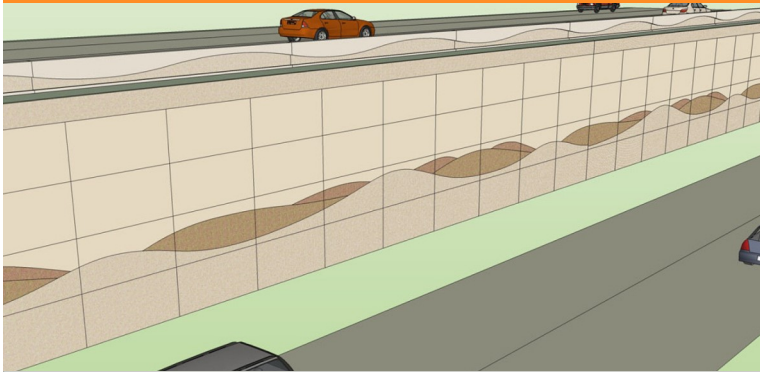
- Project No. NHSX-030-7(143)—3H-57
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Cedar Rapids US 30 misc
- 3D model (.skp) available
- Note: Located at US 30 EB ramp to 'C' Street
- Features:
  - CIP concrete cantilever wall with footing
  - Form liner textured concrete
  - Steel pipe OSHA railing on CIP coping





# Retaining Walls: CBIS MSE and Precast Walls, Council Bluffs, IA

KMO

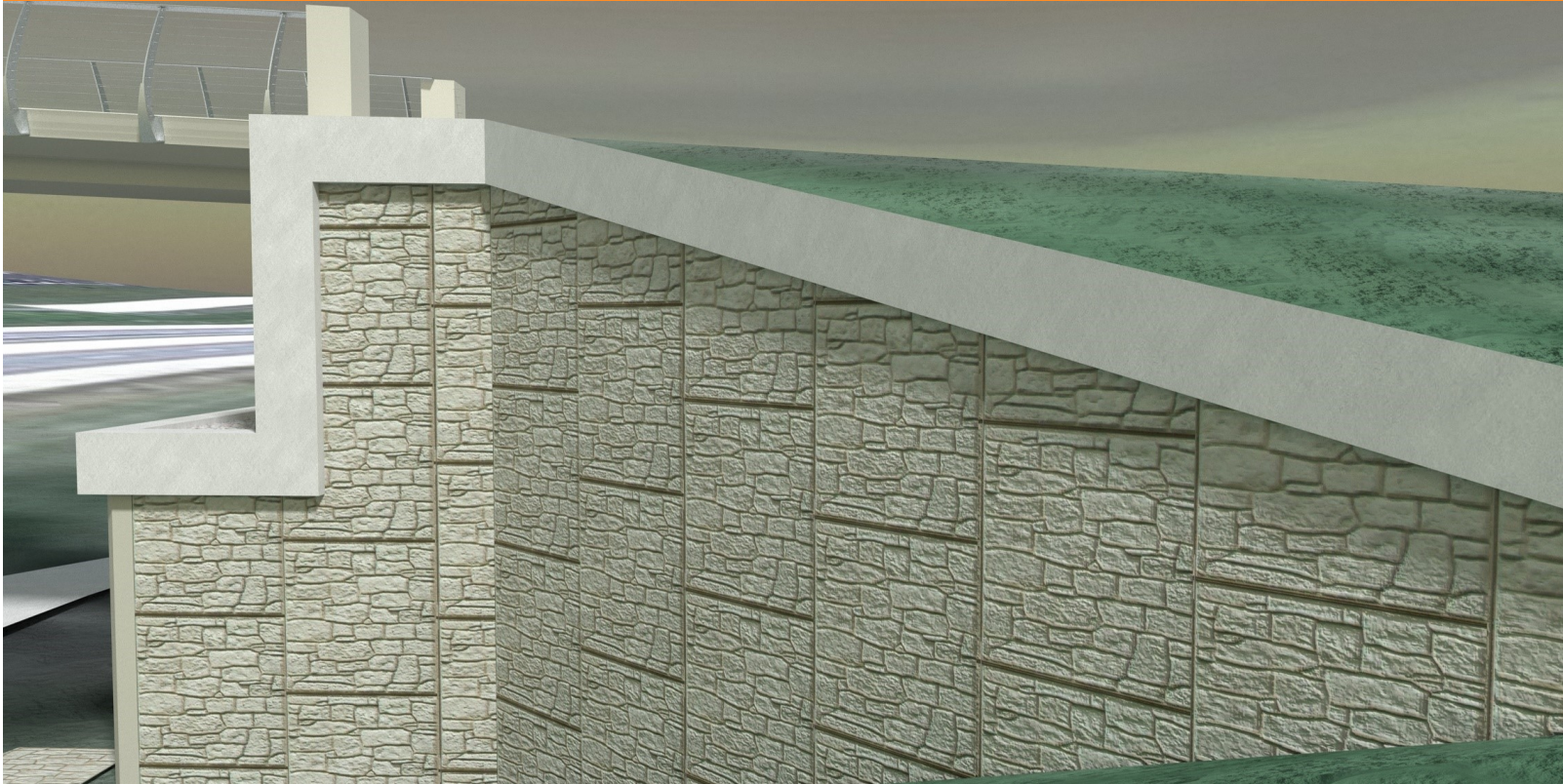


## Pottawattamie County

- Project Nos. IM-NHS-080-1(459)4-03-78, IM-029-3(190)53--13-78, IM-NHS-080-1(374)-03-78, IM-029-3(171)48-03-78, IM-NHS-080-1(447)5-03-78 (examples only—not all-inclusive)
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Council Bluffs Interstate System
- 3D model (.skp) available
- Features:
  - Supports abutments of various bridges in CBIS
  - Multiple unique MSE panel types (7) required to create pattern
  - Nominal 10' x 5' MSE panels (plan requirement)
  - Integrally colored and textured MSE panels and precast fascia wall panels
  - Precast panels used at EPS foam fill
- Costs (examples only—not all-inclusive):
  - MSE wall (2016) \$36.43/SF (\$37.17/SF avg bid)
  - MSE wall (2022) \$34.49/SF (\$35.26/SF avg bid)
  - Precast fascia panels (2022) \$74.87/SF (\$71.72/SF avg bid)



# Retaining Walls: Trout Run Trail MSE Wall at IA 9, Decorah, IA



## Winneshiek County

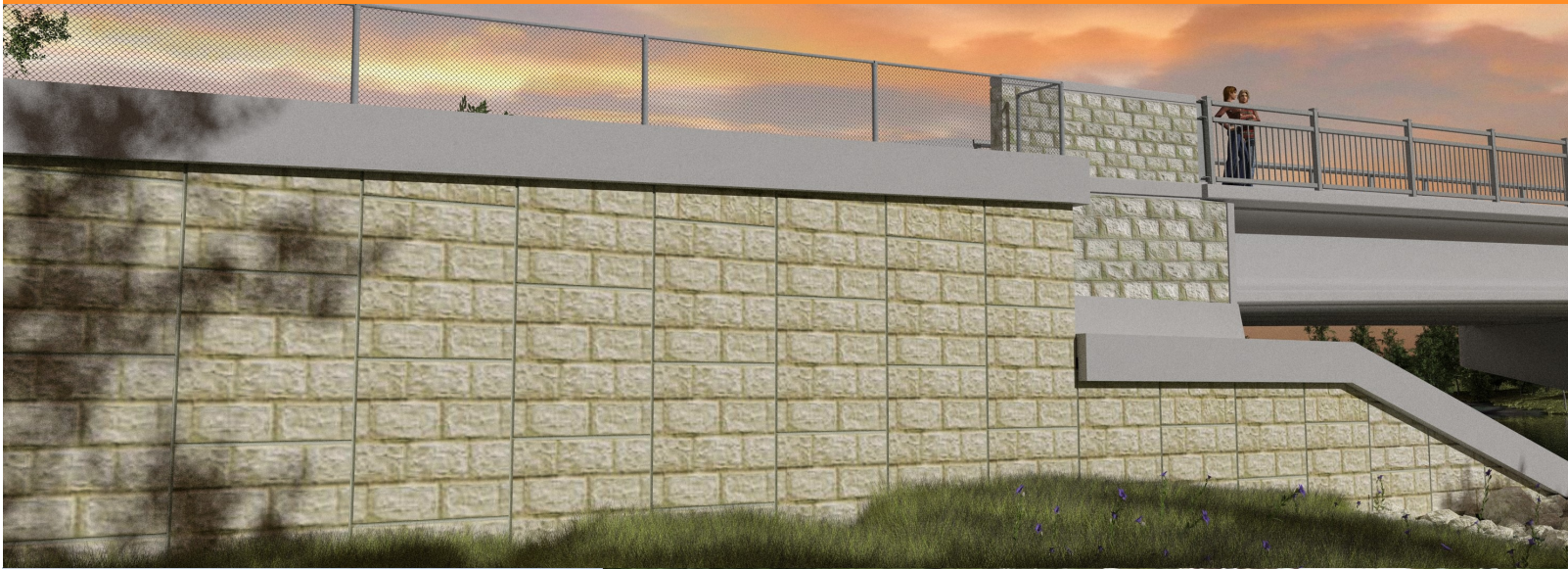
- Project No. STP-ES-1867(609)—81-96
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Decorah (various)
- 3D model (.skp) available (see bridge model)
- Features:
  - Supports abutments of Trout Run Trail bridge over IA 9 (same project no.)
  - Nominal 5' x 5' MSE panels (plan requirement)
  - Integrally colored and textured MSE panels
- Costs (2011):
  - MSE wall \$36/SF (\$37.75/SF avg bid)





# Retaining Walls: IA 98 MSE Wall near Des Moines River, Leando, IA

KMO



## Van Buren County

- Project No. BRFN-098-1(7)-39-89
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Douds & Leando IA 98 DM River
- 3D model (.skp) available (see bridge model)
- Features:
  - Supports north abutment of Des Moines River bridge connecting Douds and Leando, IA (Van Buren Co. Design No. 114, same project no.)
  - Nominal 10' x 5' MSE panels used (VE proposal by contractor; plans showed 5'x5' nominal)
  - Integrally colored and textured MSE panels
  - Texture pattern created 4 full courses of cut stone within 5' nominal panel height (plans assumed only 12-inch course patterns were available)
- Costs (2013):
  - MSE wall \$40/SF (\$48.20/SF avg bid)

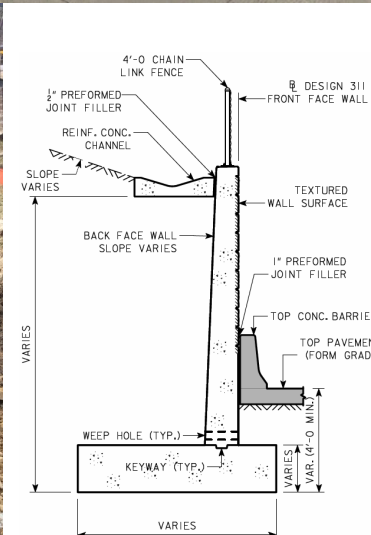
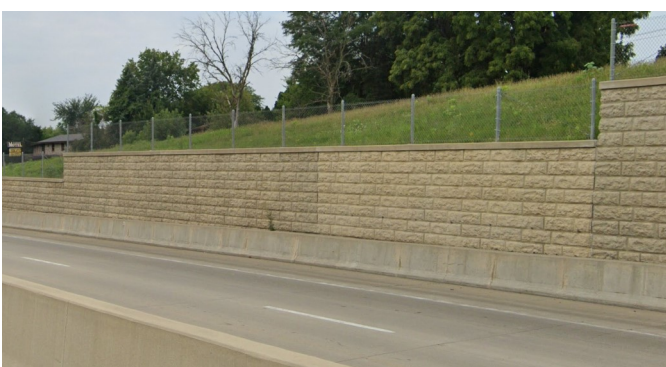
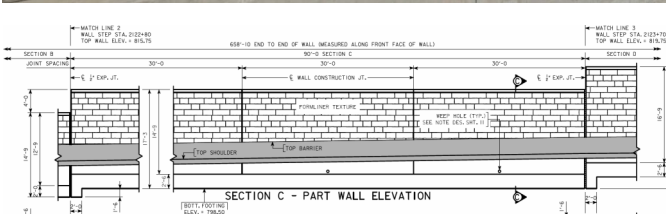


# Retaining Walls: US 52 Reinforced Concrete Walls, Dubuque, IA



## Dubuque County Design Nos. 211, 311

- Project No. NHSX-052-2(83)—3H-31
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Dubuque (various)
- Features:
  - Soldier pile wall with CIP fascia (Design No. 211)
  - CIP concrete cantilever wall with footing (Design No. 311)
  - Form liner textured concrete
  - Chain link fence on wall top surface





# Retaining Walls: US 151 CIP & MSE Walls, Fairfax, IA

KMO



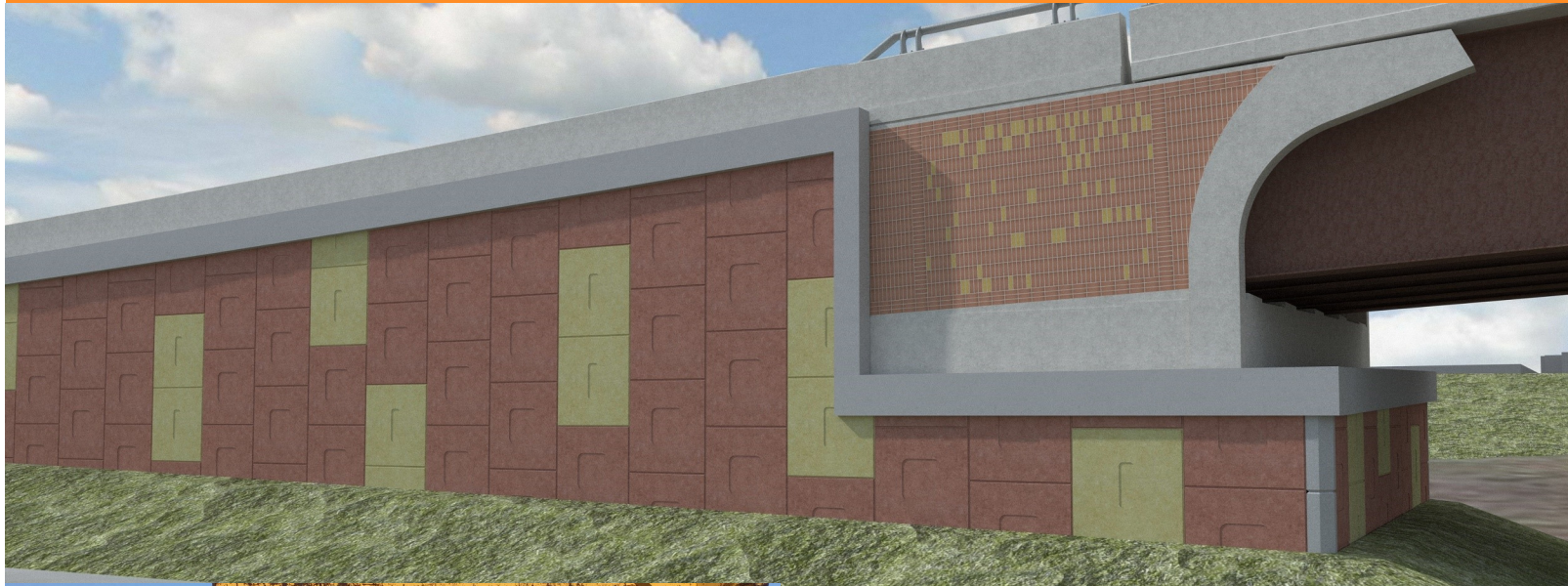
## Linn County Design No. 918 + MSE

- Project No. NHSX-151-3(158)-3H-57
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Fairfax US 151
- 3D model (.skp) available (MSE wall only)
- Features:
  - CIP concrete cantilever wall with footing (Design No. 918)
  - MSE wall supports abutments of bridge over UPRR (Linn Co. Design No. 418, BRF-151-3(141)-38-57)
  - Nominal 10' x 5' MSE panels (plan requirement)
  - Textured MSE panels (no color)
  - Chain link fence on top of CIP wall, on CIP coping at MSE wall



# Retaining Walls: I-35 NB to US 30 WB Ramp MSE Walls, Ames, IA

KMO

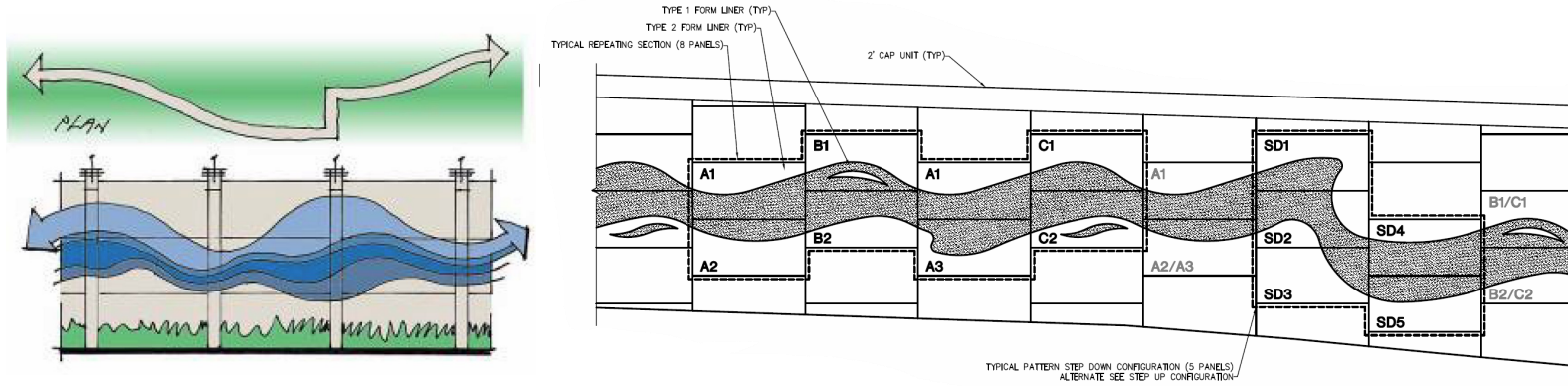


## Story County

- Project No. IM-035-4(182)112-13-85
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-35 & US 30 Interchange
- 3D model (.skp) available (see bridge model)
- Features:
  - Supports abutments of ramp bridge (Story Co. Design No. 616, IM-035-4(183)112-13-85)
  - Nominal 5' x 5' MSE panels (plan requirement)
  - Multiple integrally colored and rusticated MSE panels (2 colors/types)
  - Acid-etched surface treatment (by fabricator)
- Costs (2016):
  - MSE wall \$40/SF (\$42.75/SF avg bid)



# Retaining Walls: I-74 MSE Walls, Bettendorf, IA

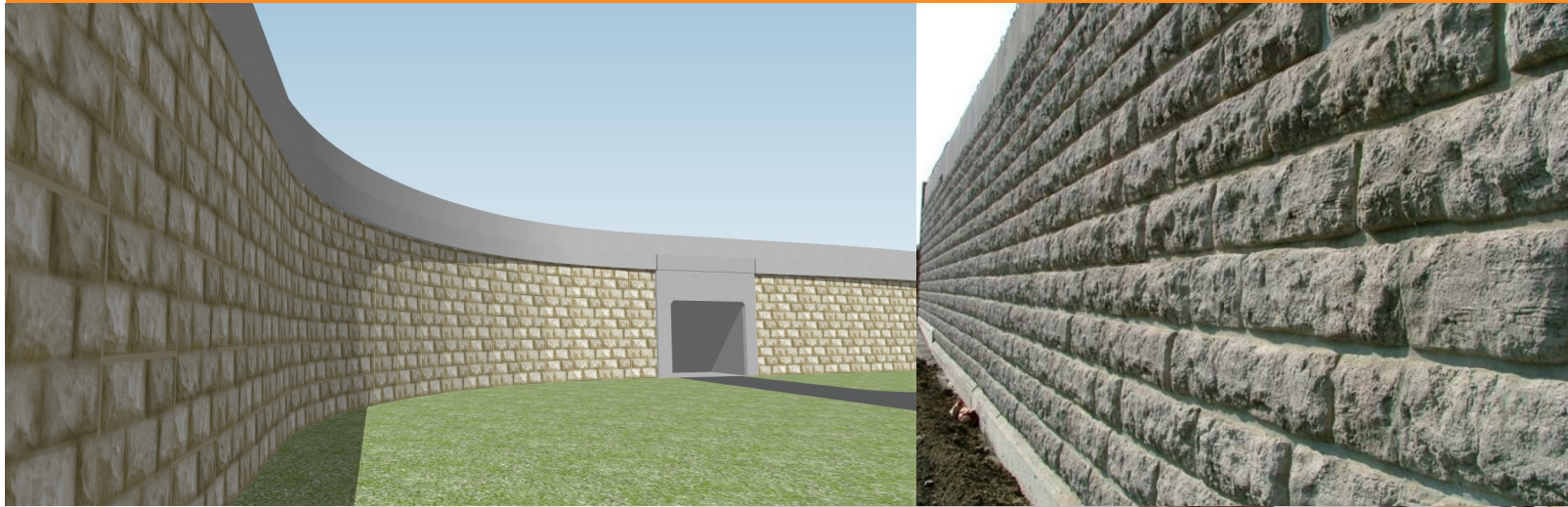


## Scott County

- Project No. IM-NHS-074-1(206)5-03-82 (example only—not all-inclusive)
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-74 Quad Cities
- Features:
  - Supports abutments of various I-74 bridges
  - Nominal 10' x 5' MSE panels (plan requirement)
  - Multiple unique panel types (11+) required to create pattern
  - Form liner textured MSE panels; textured surface projected 0.75 inch + texture depth from surrounding surface
- Costs (2018):
  - MSE wall \$43.50/SF (\$41.75/SF avg bid)



# Retaining Walls: I-80/1st Street Interchange MSE, Coralville, IA



## Johnson County

- Project No. IM-080-6(488)242-13-52
  - Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-80 bridges + (various)
  - 3D model (.skp) available (tunnel portal study only)
  - Features:
    - Supports abutments of 1st St DDI bridges and adjacent pedestrian bridge (Johnson Co. Design Nos. 524, 624, and 724); several tunnels engage the walls in this project
    - Nominal 5' x 5' MSE panels (plan requirement, primarily to accommodate wall curvature)
    - Integrally colored and textured MSE panels
- Costs (2022):
- MSE wall \$71.28/SF (\$73.88/SF avg bid)



# Retaining Walls: I-80/Hickman Rd Interchange MSE, Urbandale, IA

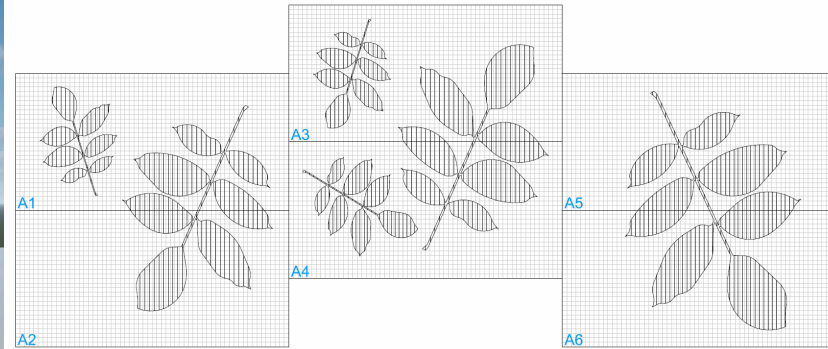
①



MSE Leaf Panel



MSE Wave Panel

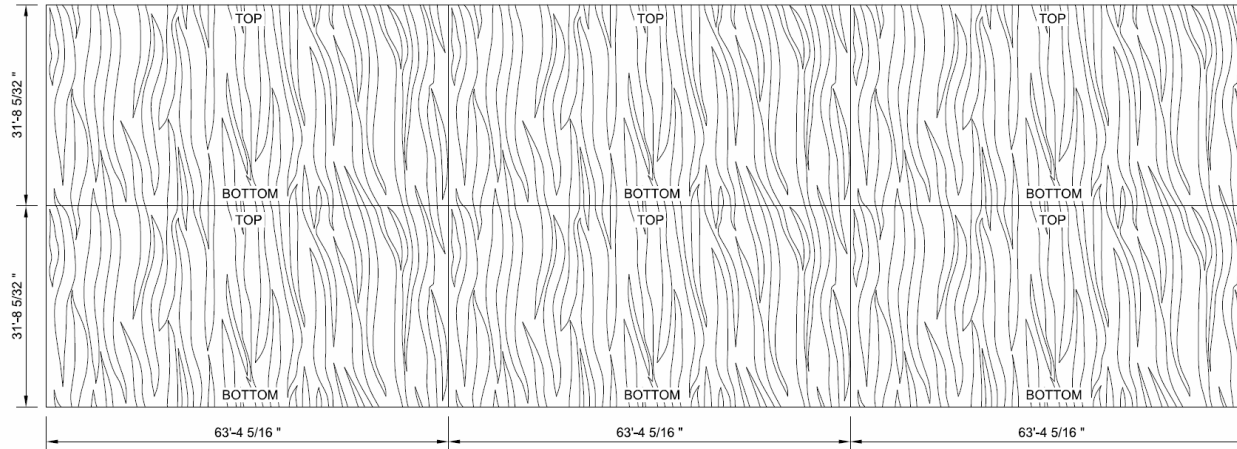


## Polk County

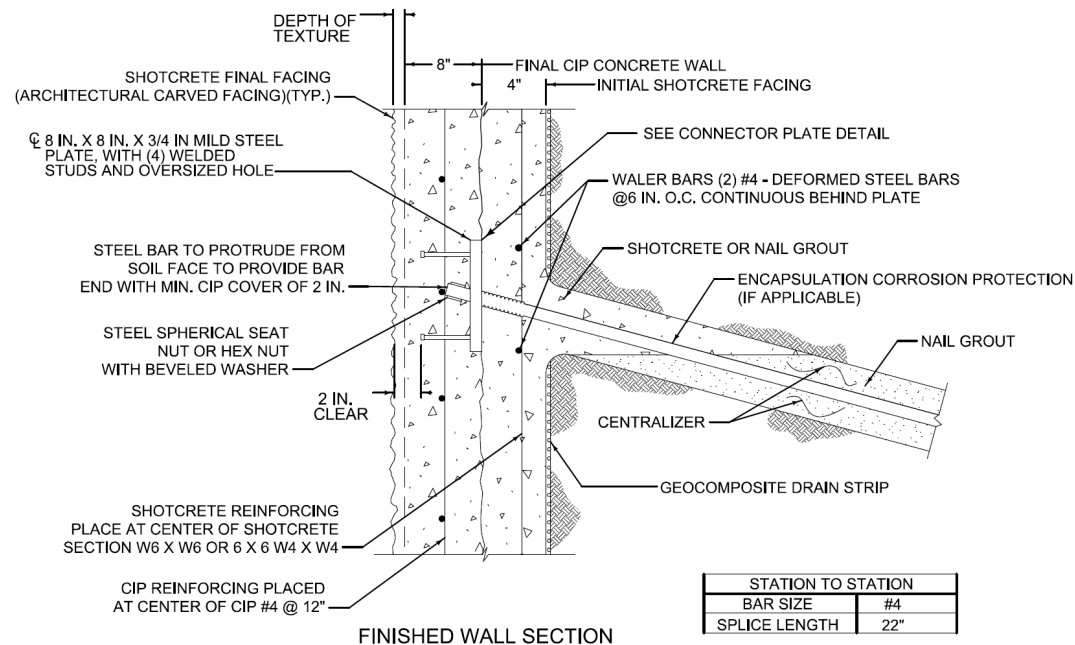
- Project No. IM-080-3(264)124-13-77
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-80 bridges + (various)
- Features:
  - Supports abutments of I-80 ML bridges and two pedestrian-only bridges
  - Nominal 10' x 5' MSE panels (plan requirement)
  - Multiple unique panel types (14) required to create 2 different patterns
  - Integrally colored and textured MSE panels
- Costs (2024):
  - MSE wall \$51.18/SF (\$55.05/SF avg bid)



# Retaining Walls: I-80/Hickman Rd Soil Nail Wall, Urbandale, IA



CAST-IN-PLACE ARCHITECTURAL WALL FINISH - AESTHETIC CONCEPT



## Polk County

- Project No. IM-080-3(264)124-13-77
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-80 bridges + (various)
- Features:
  - Soil nail wall system with aesthetic concrete facing (see Special Provisions SP-230200)
  - Integrally colored and textured CIP concrete
- Costs (2024):
  - Soil nail system \$91.50/SF (\$91.25/SF avg bid); aesthetic facing was incidental to wall construction



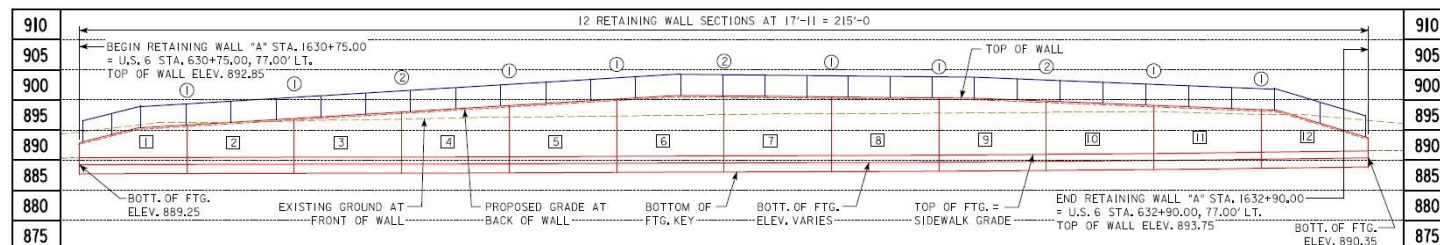
# Retaining Walls: US 6 Hickman Rd CIP Wall, Urbandale, IA

KMO



## Polk County Design No. 521

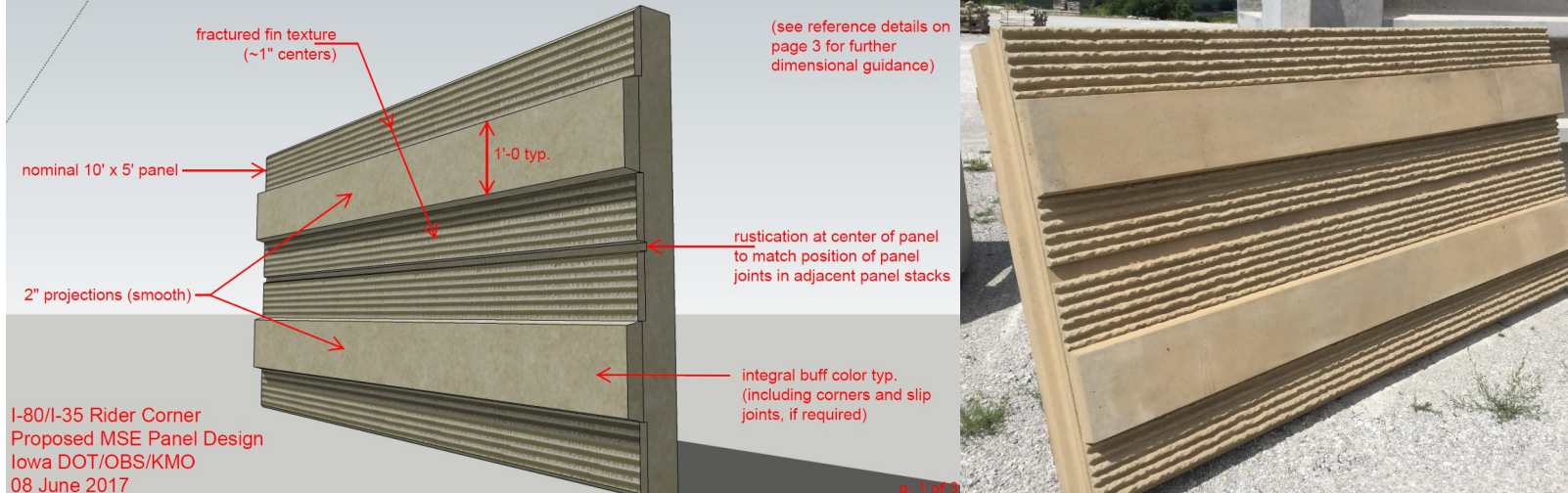
- Project No. NHSN-006-4(189)--2R-77
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Misc Jobs + Local Systems
- 3D model (.skp) available
- Features:
  - Cantilever concrete CIP wall with footing
  - Form liner concrete texture and rustication
  - Welded picket railing fall protection
- Costs (2021)
  - Welded picket railing \$175/LF (\$187.62/LF avg bid)





# Retaining Walls: I-80/IA 141 NB Ramp MSE, Urbandale, IA

KMO

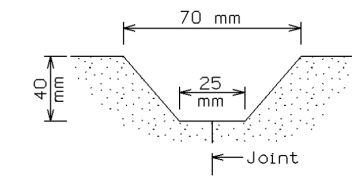


## Polk County

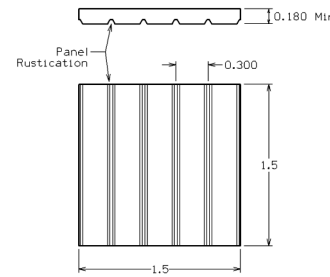
- Project No. IM-080-3(182)127-11-77
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-80 bridges + (various)
- 3D model (.skp) available
- Features:
  - Supports north abutment of ramp bridge (Polk Co. Design No. 1818, IM-080-3(183)127-13-77)
  - Nominal 10' x 5' MSE panels (plan requirement)
  - Integrally colored and textured MSE panels
  - Panels include smooth finished segments projected 2 inches from surrounding textured surfaces
  - This panel design used again at I-380 & I-80 Interchange, NHS-080-6(372)239-11-52 (2020)
- Costs (2018):
  - MSE wall \$29.10/SF (\$29.10/SF avg bid)



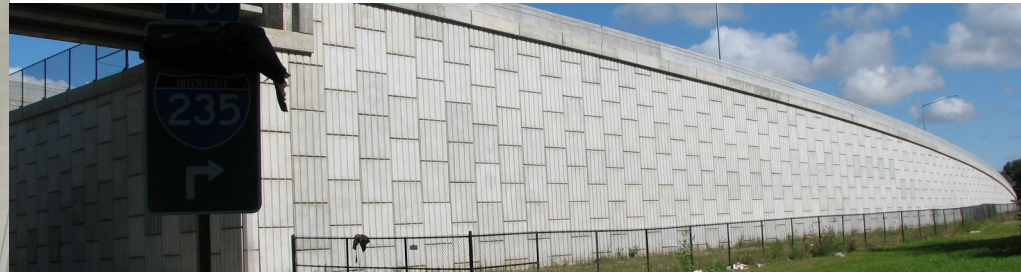
# Retaining Walls: I-235 MSE Walls, Des Moines, IA



RUSTICATION DIMENSIONS



PANEL DIMENSIONS

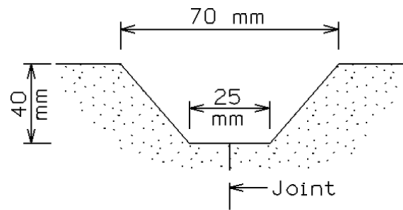


## Polk County

- Project Nos. IM-NHS-235-2(269)7-03-77, IM-NHS-235-2(268)9-03-77 (examples only—not all-inclusive)
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-235 Corridor Des Moines
- Features:
  - Supports abutments of various overhead and mainline bridges throughout I-235 corridor and I-235/I-80/I-35 Northeast Mixmaster
  - Nominal 5' x 5' MSE panels (plan requirement)
  - Rusticated MSE panels
  - Concrete storm drainage trough behind tops of some walls



# Retaining Walls: I-235 Reinforced Concrete Walls, Des Moines, IA



RUSTICATION DIMENSIONS



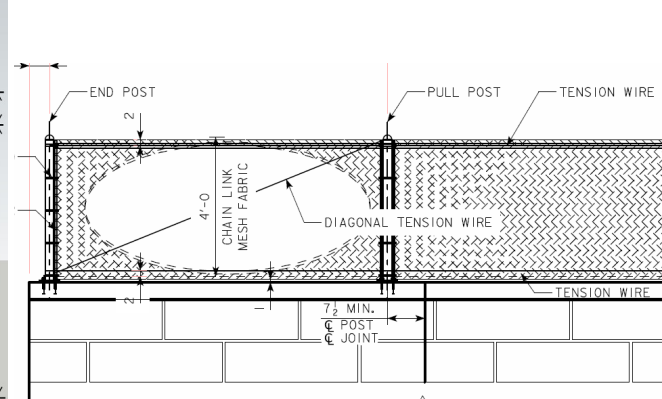
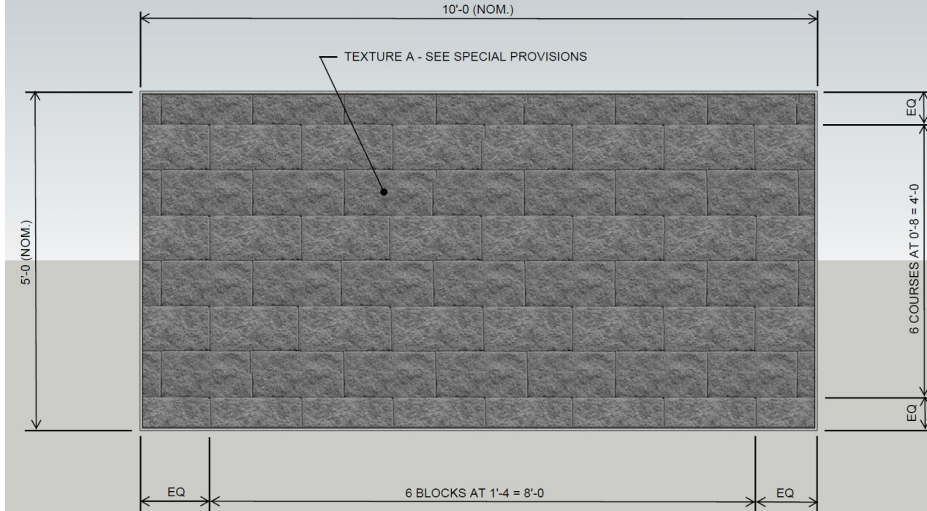
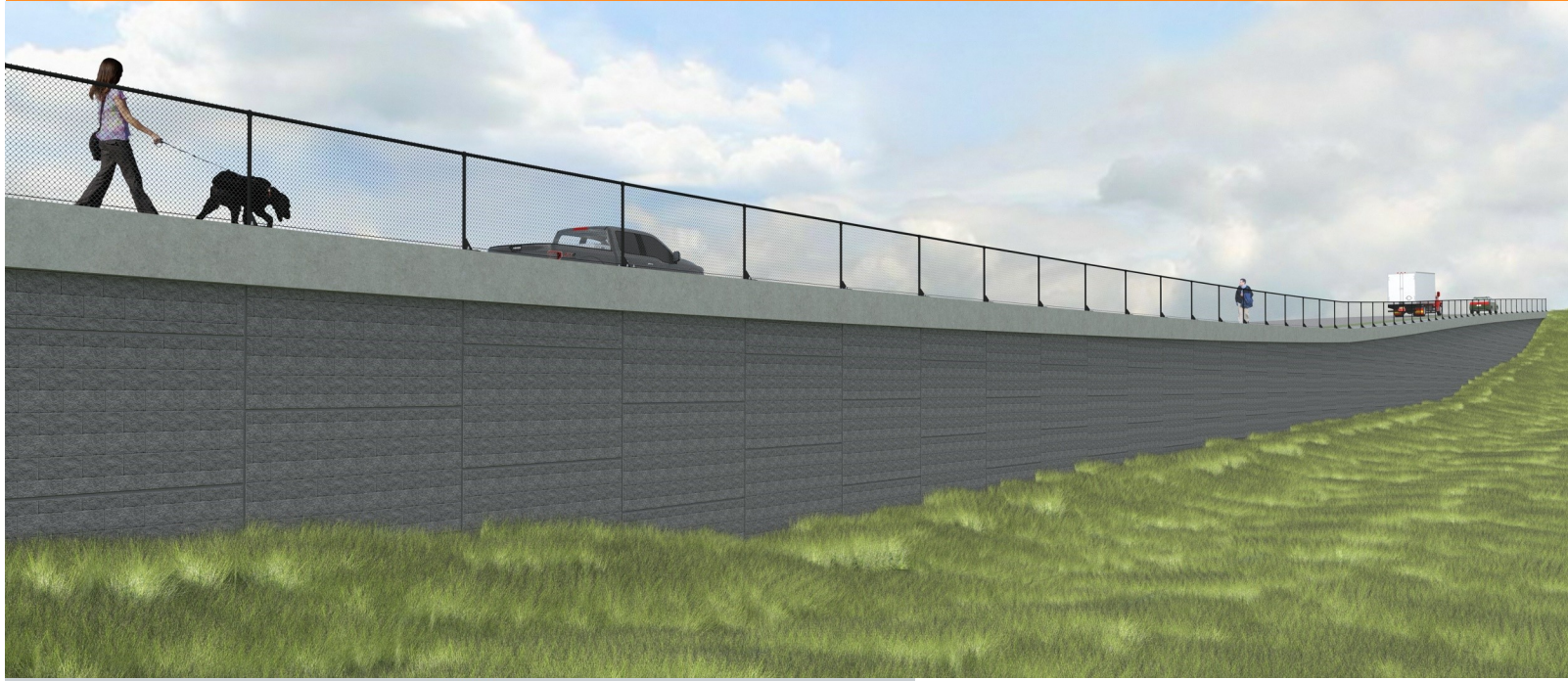
Polk County Design Nos. 4403, 4203, 4303, 5603, 2404, 2504, 2606 (examples—not all-inclusive)

- Project Nos. IM-235-2(331)10--13-77, IM-NHS-235-2(332)10-13-77, BRFIM-235-2(294)5--05-77, BRFIM-235-2(315)8--05-77, BRFIM-235-2(316)8-05-77, IM-235-2(313)8--13-77 (examples only—not all-inclusive)
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-235 Corridor Des Moines
- Features:
  - Soil nail and soldier pile walls with CIP concrete facing
  - Cantilever concrete walls with footings
  - Some wall types support bridge abutments
  - Rustications to match MSE wall treatment
  - Concrete storm drainage trough behind tops of some walls
  - Some tiered walls include continuous cable tie-off (OSHA worker fall protection) for maintenance operations



# Retaining Walls: Wright Bros MSE Wall near I-380, Cedar Rapids, IA

KMO



CHAIN LINK FENCE DETAILS

## Linn County

- Project No. IM-380-6(449)14-13-57
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-380 Cedar Rapids (various)
- 3D model (.skp) available
- Features:
  - Supports local road and trail
  - Nominal 10' x 5' MSE panels (plan requirement)
  - Integrally colored and textured MSE panels
  - 4'-0 chain link fence on CIP coping along parallel pedestrian path
- Costs (2024):
  - MSE wall \$63/SF (\$70.50/SF avg bid)



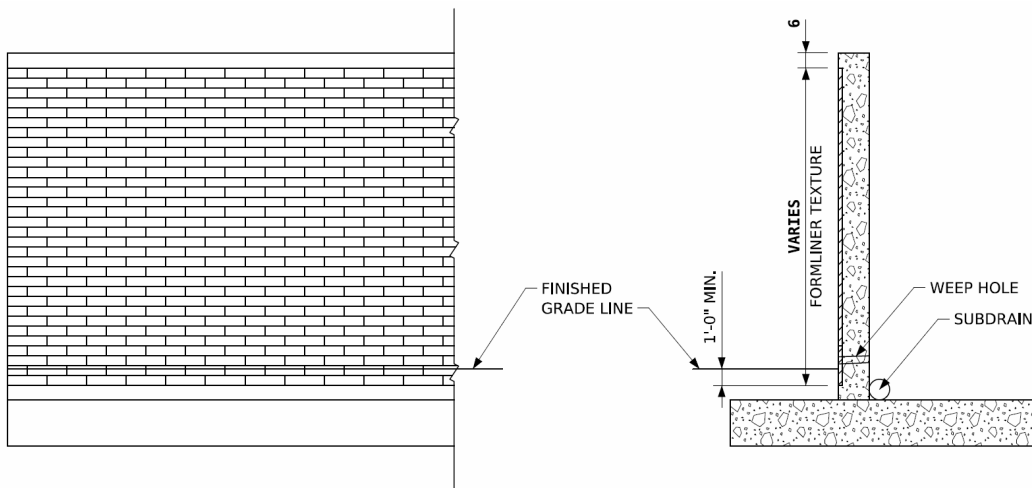
# Retaining Walls: Boyson Road CIP Wall near I-380, Hiawatha, IA

KMO



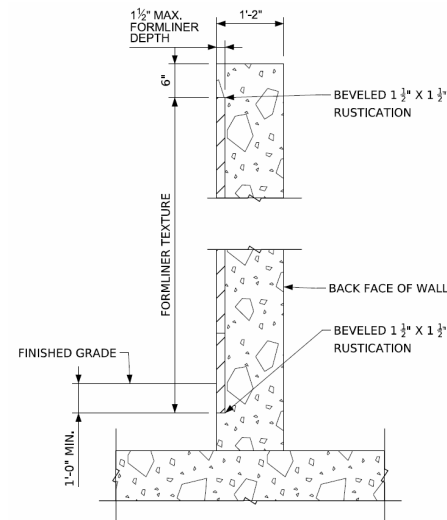
## Linn County Design No. 1425

- Project No. IM-380-6(358)25-13-57
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-380 Hiawatha DDIs
- 3D model (.skp) available
- Features:
  - Supports local road and trail
  - CIP concrete cantilever wall with footing
  - Form liner texturing
  - Chain link AC fence ground-mounted behind wall for fall protection



**TYPICAL WALL ELEVATION**

**TYPICAL WALL SECTION**

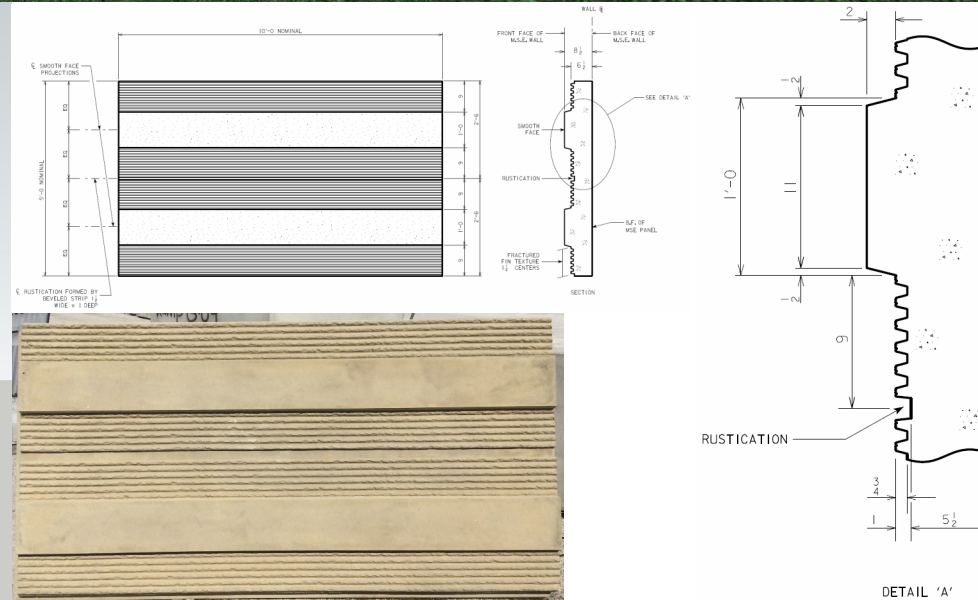
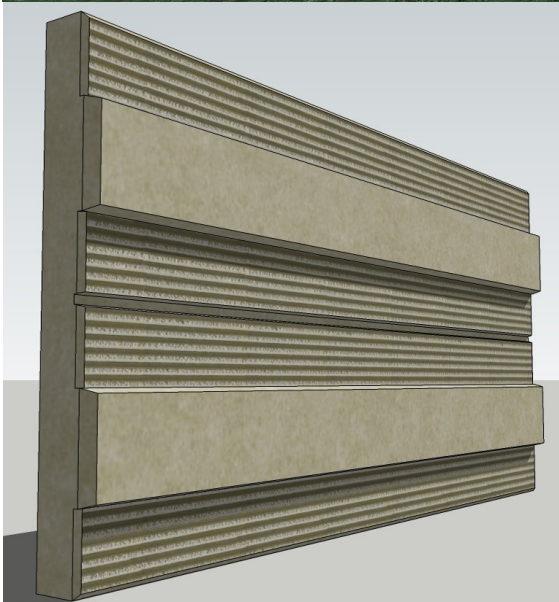
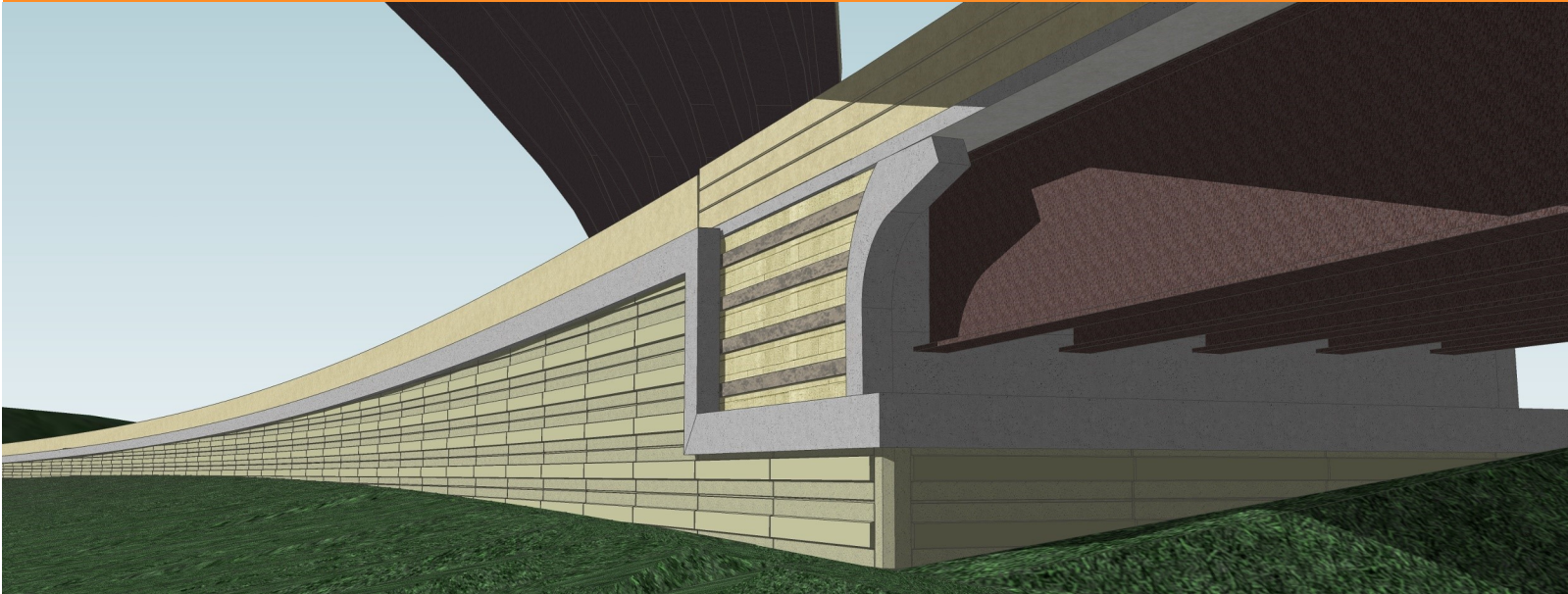


**LIMITS OF WALL TEXTURE**



# Retaining Walls: I-380 & I-80 Interchange MSE, Coralville, IA

KMO



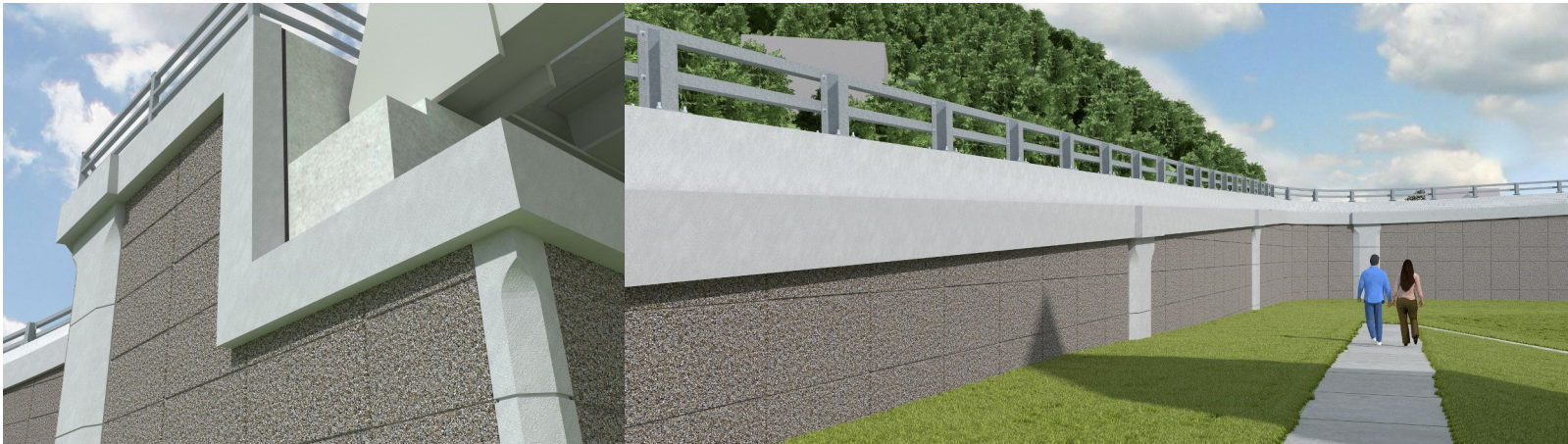
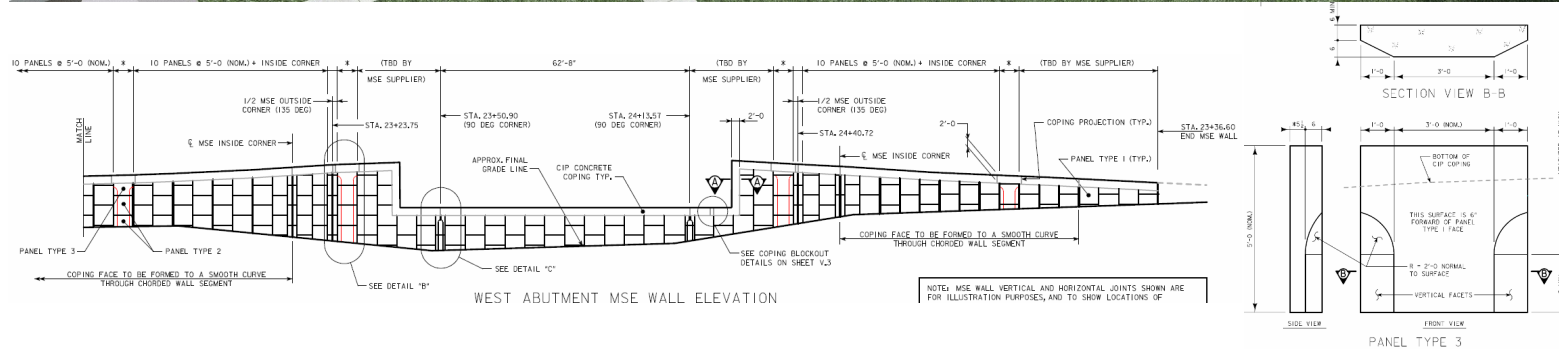
## Johnson County

- Project No. NHS-080-6(372)239-11-52
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-380&I-80 Interchange Area
- 3D model (.skp) available
- Features:
  - Supports north abutment of US 218 NB to I-80 WB ramp bridge (Johnson Co. Design No. 223, NHS-080-6(360)239-13-52)
  - Nominal 10' x 5' MSE panels (plan requirement)
  - Integrally colored and textured MSE panels
  - Panels include textured segments projected 2 inches from surrounding textured surfaces
  - MSE panels identical to those used on I-80/IA 141 NB Ramp MSE, Urbandale, IA, IM-080-3(182) 127-11-77 (2018)
- Costs (2020):
  - MSE wall \$52.75/SF (single bidder)



# Retaining Walls: IA 9/IA 26 MSE Wall, Lansing, IA

KMO



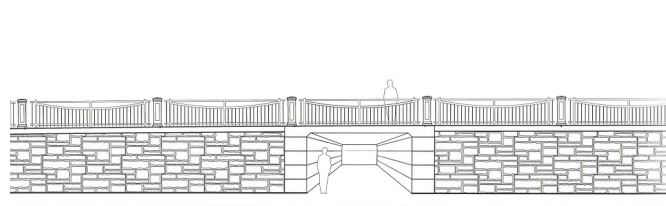
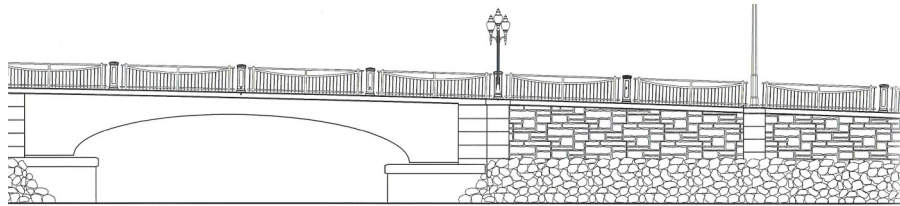
## Allamakee County

- Project No. STP-009-9(82)—2C-03
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Lansing IA 9
- 3D model (.skp) available
- Features:
  - Supports west abutment of IA 9/VI 82 bridge over the Mississippi River (Allamakee Co. Design No. 124, STP-009-9(84)—2C-03)
  - Nominal 5' x 5' MSE panels (plan requirement)
  - Integrally colored MSE panels with exposed Mississippi River gravel aggregates on face
  - Multiple unique panel types (3) and special MSE corner pieces required
  - Custom welded tube fall protection railing
- Costs (2023):
  - MSE wall \$160/SF (\$177.79/SF avg bid)
  - Welded tube railing \$180/LF (\$226.41/LF avg bid)



# Retaining Walls: US 71 Okoboji Lakes Causeway MSE, Okoboji, IA

KMO



## Dickinson County

- Project Nos. NHS-71-9(39)-19-30, NHS-71-9(40)-19-30
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Okoboji US 71
- Features:
  - Supports abutments of causeway bridge (Dickinson Co. Design No. 196, NHSX-71-9(38)-3H-30)
  - Nominal 5' x 5' MSE panels
  - Integrally colored and textured MSE panels
  - White cement concrete CIP wall coping (to match adjacent white concrete traffic barrier also constructed with project)
  - Intermittent concrete pedestals for light poles
  - Parallel walls connected by continuous straps beneath the roadway for a portion of the project
  - Tiered MSE wall condition at pedestrian access ramp to beachfront
- Costs (1999):
  - MSE wall \$111.63/SF (\$111.63/SF avg bid)
  - White concrete coping \$238/LF (\$239/LF avg bid)



# Retaining Walls: US 71 Gravity Block Walls, Okoboji, IA

KMO



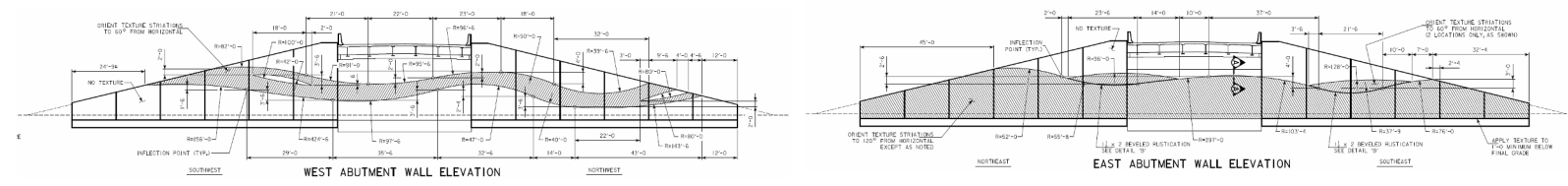
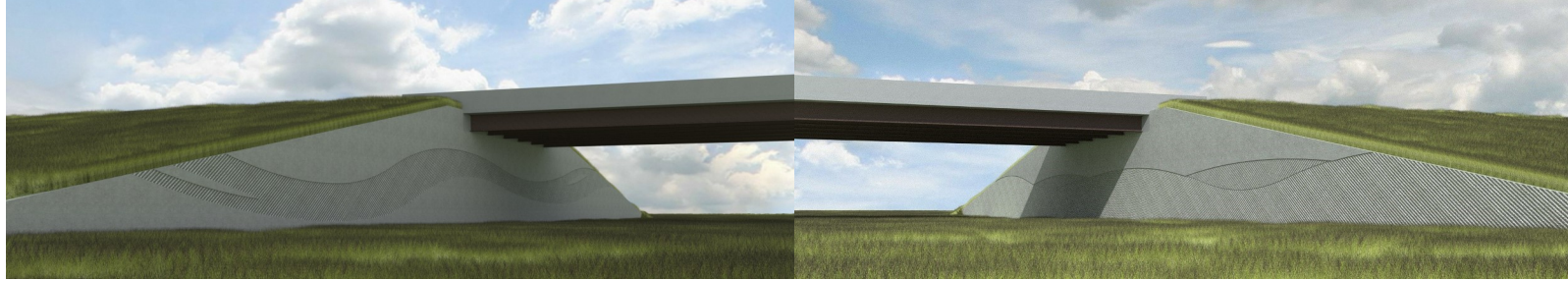
## Dickinson County

- Project No. NHS-71-9(40)—19-30
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Okoboji US 71
- Features:
  - Supports properties adjacent to US 71 immediately north of Okoboji Lakes Causeway bridge (Dickinson Co. Design No. 196, NHSX-71-9(38)—3H-30)
  - Integrally colored and textured gravity blocks
  - CIP concrete coping with coating (Class 3 Special Surface finish, a cementitious acrylic paint)
  - Chain link fall protection fence mounted to coping
- Costs (1999):
  - Block wall \$146.18/SF (\$144.45/SF avg bid)



# Retaining Walls: Co. Rd. K25 over I-29 CIP Concrete Walls, Salix, IA

KMO



## Woodbury County Design No. 715

- Project No. BRFIMX-029-6(246)134--14-97
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Salix I-29
- 3D model (.skp) available
- Features:
  - Supports abutments of Co. Rd. K25 bridge over I-29 (same Design No. and Project No. as above)
  - CIP concrete cantilever walls with footings
  - Form liner textured concrete with rustications defining "hills" and "river" themes
  - EPS fill material used behind walls
  - Note: unprotected drop from structure is not preferred; ground-mounted fence behind wall would improve conditions for inspection and incidental worker proximity (including mowers)



# Retaining Walls: I-29 Corridor MSE & Precast Walls, Sioux City, IA

KMO



10' x 5' (nominal) typical MSE panel:

- 1/4" +/- deep brick form liner texture
- integral concrete color
- standard panel thickness + 1/4"

5' x 5' (nominal) pilaster MSE panel:

- integral thin veneer brick
- standard gray Portland cement mix
- standard panel thickness + 4"



## Woodbury County

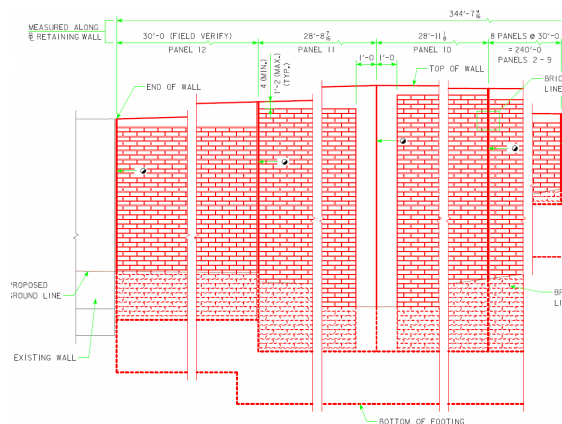
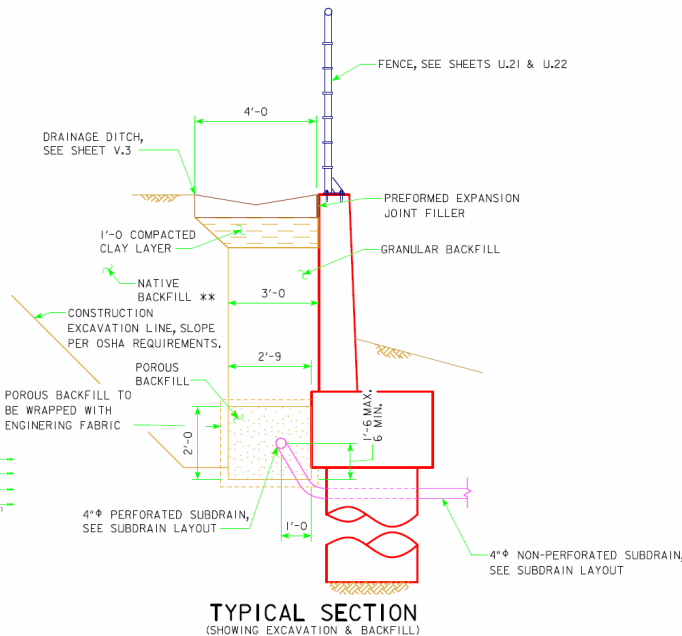
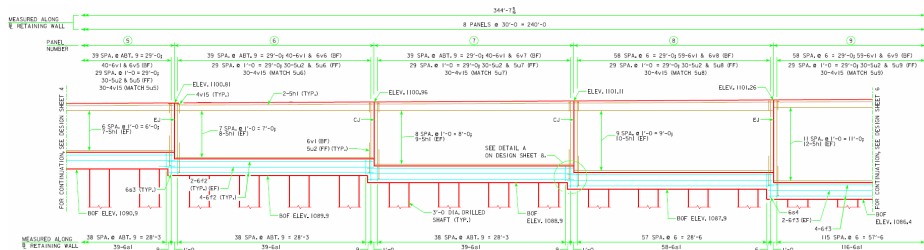
- Project Nos. IM-NHS-029-7(47)149-03-97, IM-NHS-029-7(50)149-03-97 (examples only—not all -inclusive)
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Sioux City I-29 Corridor
- 3D model (.skp) available (see bridge models)
- Features:
  - Supports abutments of various I-29 mainline and overhead bridges within corridor
  - Nominal 10' x 5' and 5' x 5' MSE panels (plan requirements)
  - Integrally colored and textured MSE panels
  - Thin veneer brick-faced, double-thickness pilaster panels (5'x5' MSE and 5' wide precast panels)
  - Precast fascia panels used at EPS foam backfill; rusticated to appear identical to MSE panels
  - Integrally colored MSE coping at US 77 over I-29
  - Integrally colored concrete paving installed above some walls within corridor
- Costs:
  - Precast fascia (2017) \$48/SF (\$48.47/SF avg bid)
  - MSE wall (2018) \$36.67/SF (\$37.01/SF avg bid)





# Retaining Walls: NB I-29 Ramp to Hamilton CIP Wall, Sioux City, IA

KMO



WALL ELEVATION



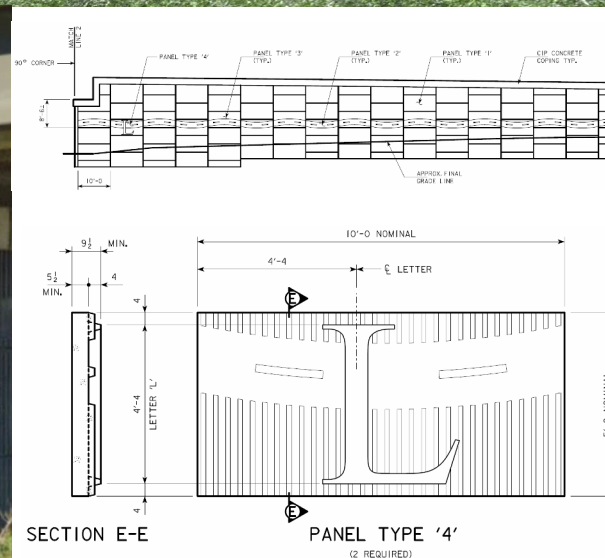
## Woodbury County Design No. 1015

- Project No. IM-NHS-029-7(45)149-03-97
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Sioux City I-29 Corridor
- Features:
  - Supports property adjacent to I-29 NB ramp
  - CIP concrete cantilever wall on footing with drilled shafts
  - Form liner textured concrete to replicate nearby MSE retaining walls
  - Concrete coating (mineral silicate paint, by separate project IMN-029-6(254)142-0E-97, 2020)
  - Concrete storm drainage trough behind wall top
- Costs:
  - Concrete coating (2020) \$55/SY (\$86.79/SY avg bid)



# Retaining Walls: US 218 & US 30 Interchange MSE, "Youngville", IA

KMO



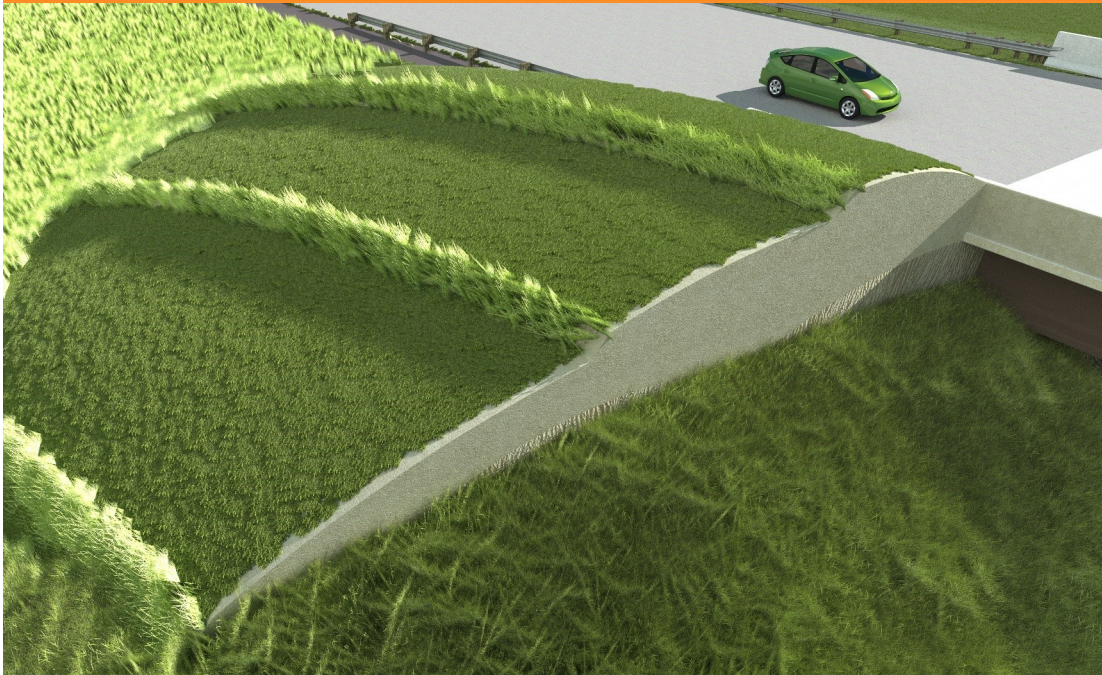
## Benton County

- Project No. NHS-030-6(231)—3H-06
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\US 30 & US 218 Youngville
- 3D model (.skp) available (see bridge model)
- Features:
  - Supports south abutment of bridge, Benton Co. Design No. 117 [NHSX-030-6(230)—3H-06]
  - Nominal 10' x 5' MSE panels (plan requirement)
  - Multiple unique panel types (4) required to create pattern
  - Integrally colored and textured MSE panels
  - Concrete coating accent (mineral silicate paint)
- Costs (2018):
  - MSE wall \$35.49/SF (\$32.43/SF avg bid)
  - Concrete coating \$76.36/SY (\$73.87/SY avg bid)



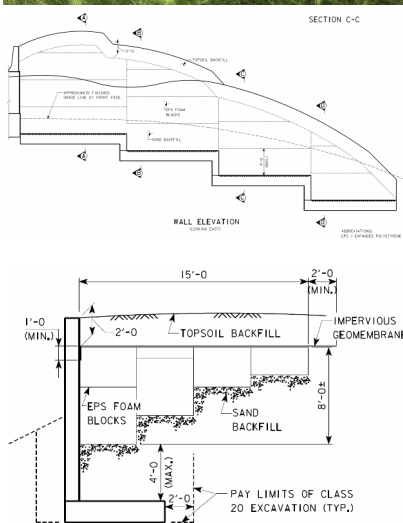
# Retaining Walls: US 34/I-29 Interchange CIP Walls, Glenwood, IA

KMO



## Mills County Design Nos. 1111, 1211

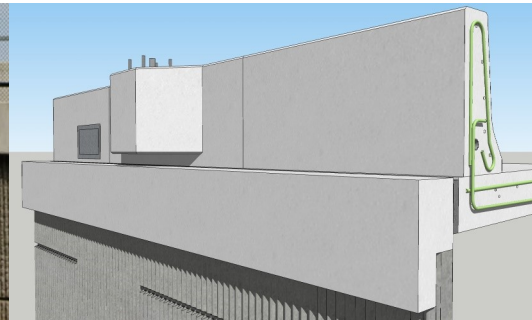
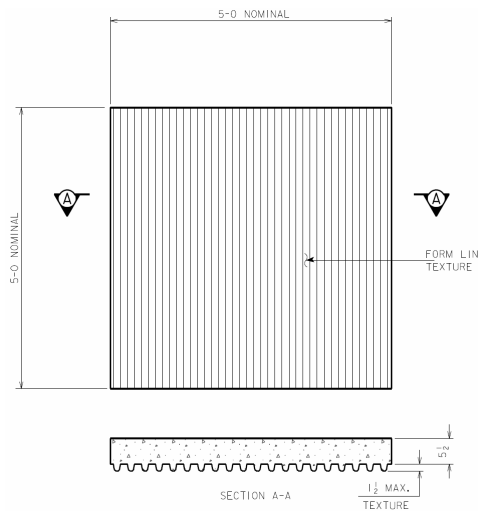
- Project Nos. NHSX-534-1(84)—3H-65, NHSX-534-1(91)—3H-65
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\US 34 & I-29 Mills County
- 3D model (.skp) available (see bridge model)
- Features:
  - Supports sideslopes at east bridge abutments
  - CIP cantilevered concrete walls with footings
  - Form liner concrete texture
  - EPS foam backfill used to reduce design loads
  - Cable OSHA fall protection railing mounted to wall tops
- Costs (2013):
  - Cable railing \$100/LF (\$96/LF avg bid)
  - EPS foam fill \$84/CY (\$128.52/CY avg bid)





# Retaining Walls: US 63 over C.C.&P.R.R. MSE Walls, Waterloo, IA

KMO

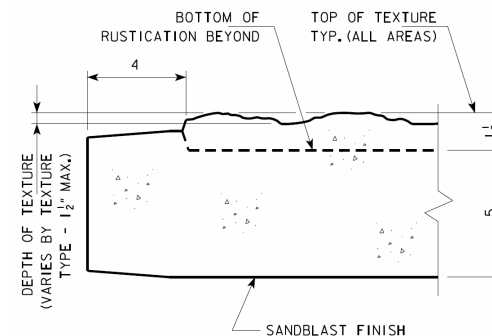
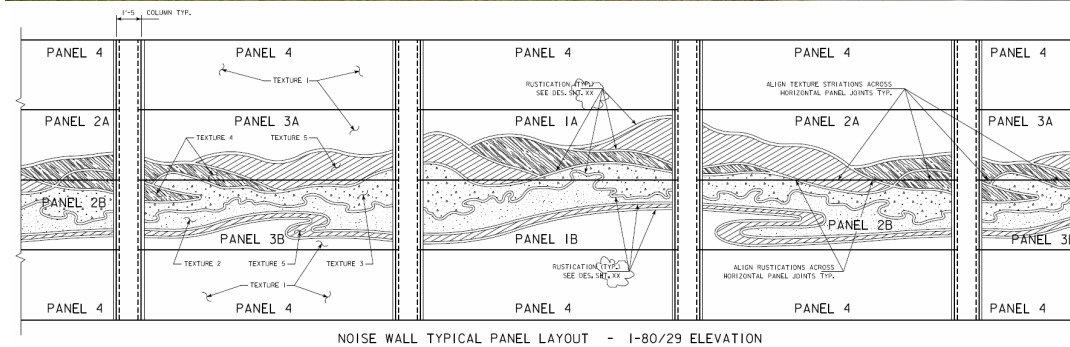


## Black Hawk County

- Project No. NHSX-063-6(75)—3H-07
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Waterloo (various)
- 3D model (.skp) available
- Features:
  - Supports abutments of bridge (Black Hawk Co. Design No. 915, NHSX-063-6(90)—3H-07)
  - Nominal 5' x 5' MSE panels (plan requirement)
  - Form liner textured MSE panels (no color)
  - Includes a tunnel through walls (Black Hawk Co. Design No. 1015, NHSX-063-6(92)—3H-07)
  - East roadway barrier includes integrated light pole bases cantilevered over the MSE coping (extensive 3D study model available)
- Costs (2017):
  - MSE wall \$28.66/SF (single bidder)



# Noise Walls: CBIS Corridor Noise Walls, Council Bluffs, IA

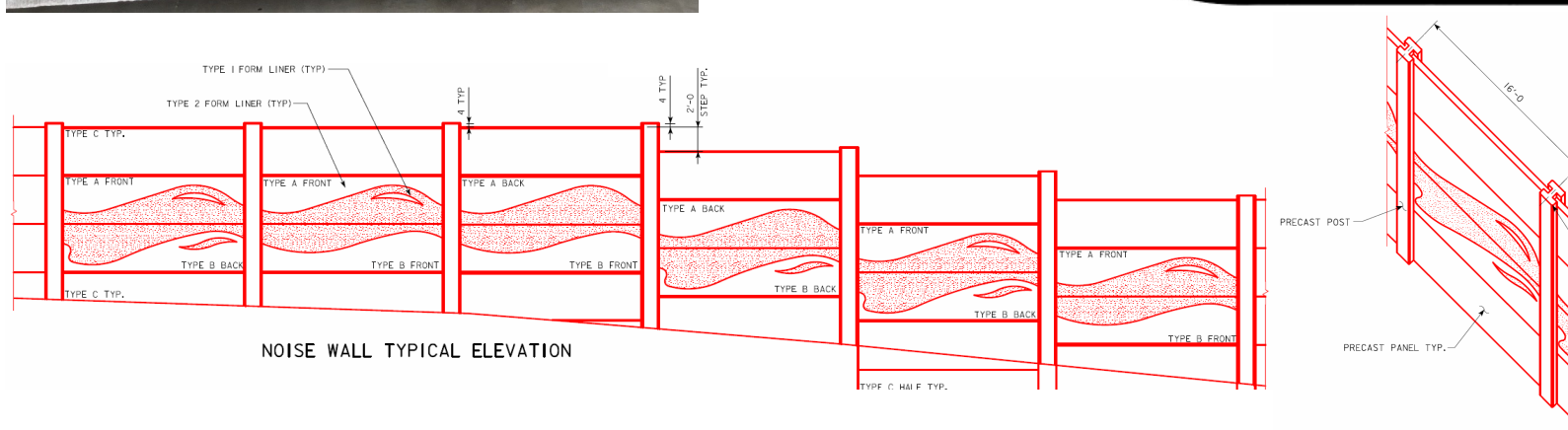
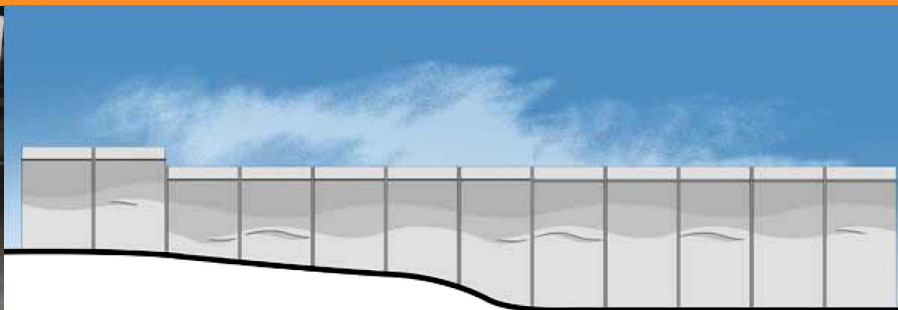


## Pottawattamie County Design Nos. 514, 816, 1422

- Project Nos. IM-NHS-080-1(419)3--03-78, IM-NHS-080-1(420)4--03-78, IM-NHS-080-1(467)5--03-78
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Council Bluffs Interstate System
- 3D model (.skp) available (no pattern)
- Features:
  - Integrally colored and textured precast panels and colored precast support posts
  - Multiple unique panels (7) and textures (5) required to create pattern
  - Abrasive blast treatment on residential side
- Costs:
  - Precast noise wall (2014) \$51.32/SF (\$55.72/SF avg bid)
  - Precast noise wall (2015) \$34.15/SF (\$38.05/SF avg bid)
  - Precast noise wall (2022) \$91.15/SF (\$93.02/SF avg bid)



# Noise Walls: I-74 Corridor Noise Walls, Bettendorf, IA



## Scott County Design Nos. 1319, 1419 (examples only)

- Project No. IM-NHS-074-1(206)5-03-82 (example only—not all-inclusive)
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-74 Quad Cities
- Features:
  - Form liner textured precast panels (no color)
  - Multiple unique panels (5) required to create pattern
- Costs (2018):
  - Precast noise wall \$45/SF (\$50/SF avg bid)

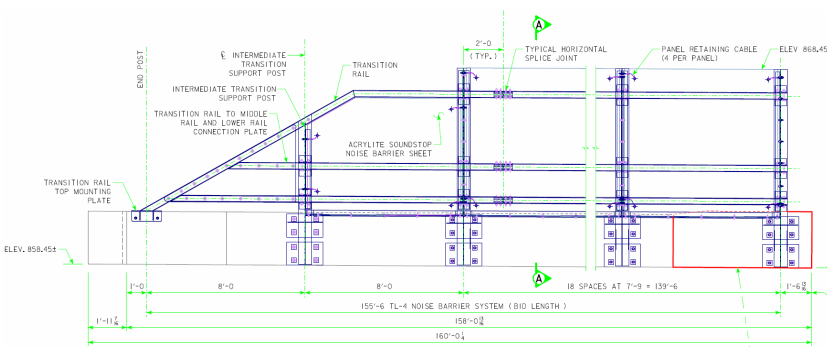


# Noise Walls: I-74 over 12th Ave Acrylite System, Moline, IL



## Rock Island County, IL (part of I-74 Corridor Project)

- Project No. (unknown)
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-74 Quad Cities
- 3D model (.skp) available [see I-380/US 218/US 20 over McCoy Rd, Evansdale, IA, Black Hawk Co. Design No. 1115, IMX-380-7(121)65-02-07]
- Features:
  - Clear acrylic panels abrasive-blasted with wave pattern to match adjacent concrete noise walls
  - Proprietary noise wall system ("Paraglas Sound stop TL4 Noise Barrier System") including structural members; crash tested to NCHRP 350 Test Level 4 (see FHWA Acceptance Letter HSA-10/B136)





# Noise Walls: I-235 Corridor Noise Walls, Des Moines, IA

KMO



Polk County Design Nos. 1201, 1402, 1905, 2905, 4705  
(examples—not all-inclusive)

- Project Nos. IM-235-2(351)11--13-77, IM-235-2(425)2--13-77, IM-235-2(404)11--13-77, IM-235-2(405)12--13-77, IM-235-2(595)7--13-77 (examples only—not all-inclusive)

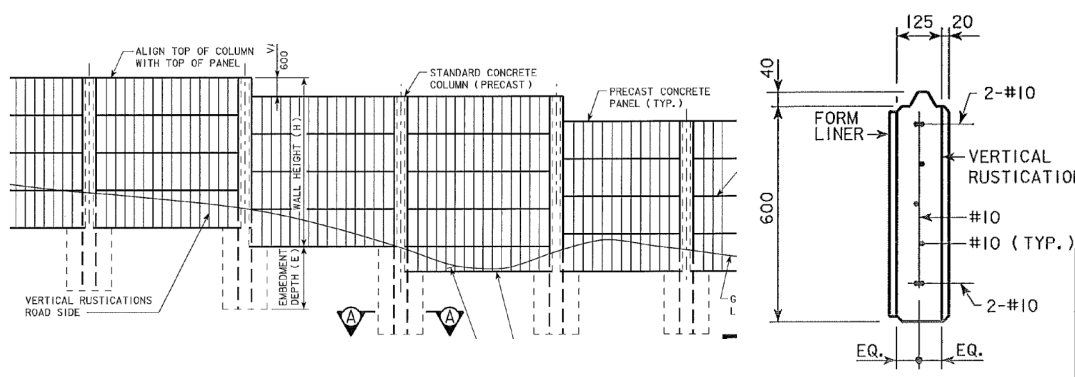
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-235 Corridor Des Moines

- Features:

- Form liner textured and rusticated precast panels
- Freeway-side treatment is consistent throughout I-235 corridor (vertical rustications)
- Residential side texture varies by location due to neighborhood-level public involvement in form liner selections

- Costs:

- Precast noise wall (2002) \$27.77/SF
- Precast noise wall (2003) \$28.17/SF
- Precast noise wall (2004) \$36.54/SF
- Precast noise wall (2005) \$29.79/SF
- Precast noise wall (2006) \$39.20/SF





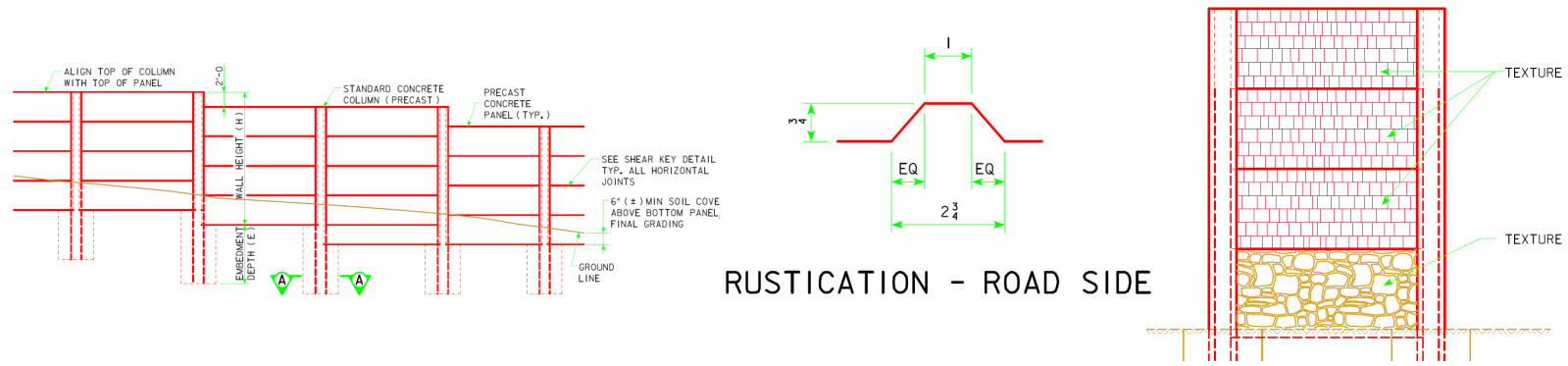
# Noise Walls: I-380 Noise Walls, Evansdale, IA

KMO



## Black Hawk County Design Nos. 1115, 1215

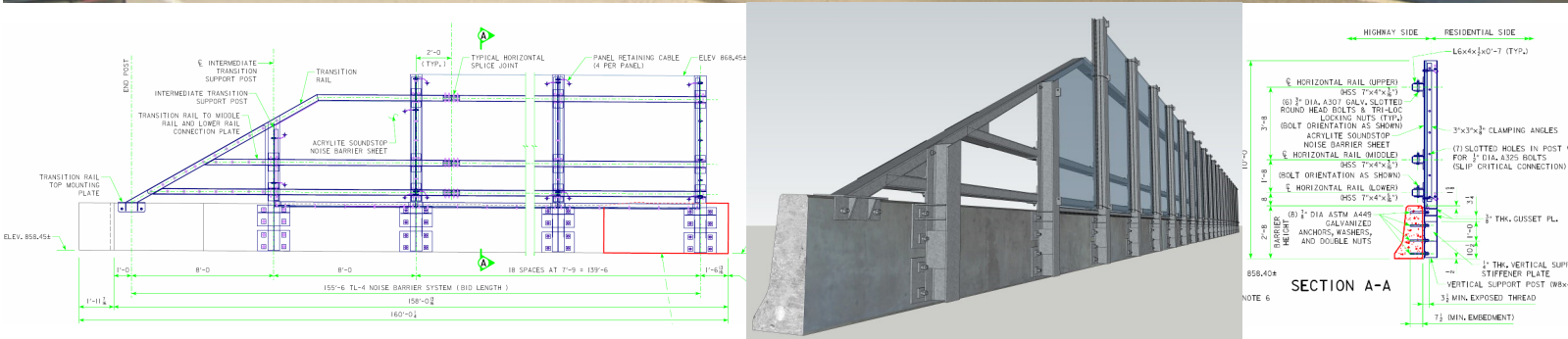
- Project No. IMX-380-7(121)65-02-07
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-380 Noise Wall at Evansdale
- 3D model (.skp) available (no texture)
- Features:
  - Form liner textured and rusticated precast panels
  - Freeway side different from residential side
  - Based on I-235 noise wall design
- Costs (2015):
  - Precast noise wall \$37.50/SF (\$42.75/SF avg bid)





# Noise Walls: I-380 over McCoy Rd Acrylite System, Evansdale, IA

KMO



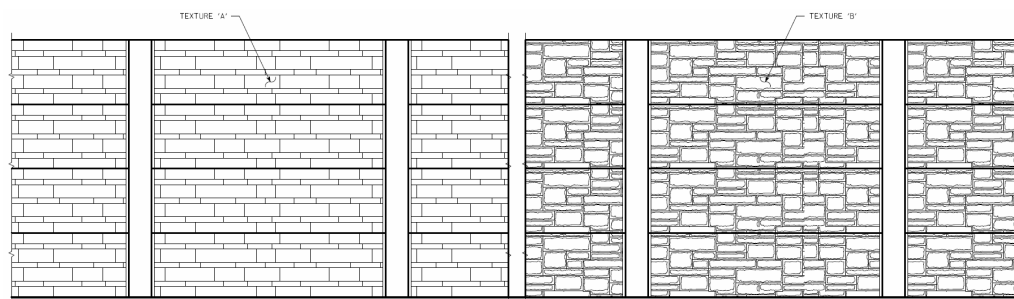
## Black Hawk County Design No. 1115

- Project No. IMX-380-7(121)65-02-07
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-380 Noise Wall at Evansdale
- 3D model (.skp) available
- Features:
  - Opaque grey acrylic panels selected to complement nearby precast walls and to block views of traffic from adjacent properties (local preference)
  - Proprietary noise wall system ("Paraglas Sound stop TL4 Noise Barrier System") including structural members; crash tested to NCHRP 350 Test Level 4 (see FHWA Acceptance Letter HSA-10/B136)
  - Classified as "investigative" on Public Interest Finding documentation
  - System was retrofit to existing concrete traffic barrier that previously supported a steel noise wall attachment
- Costs (2015):
  - Acrylite wall \$170/SF (\$170/SF avg bid)



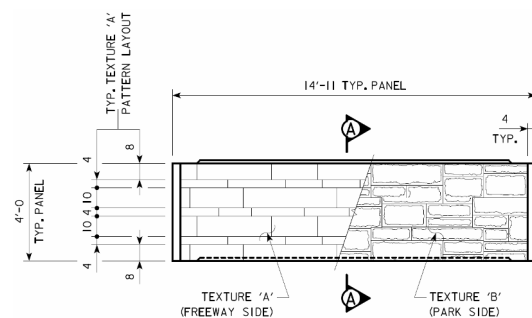
# Noise Walls: I-80/I-380/US 218 Noise Wall, Coralville, IA

KMO



NOISE WALL TYPICAL WEST ELEVATION  
(FREEWAY SIDE)

NOISE WALL TYPICAL EAST ELEVATION  
(PARK SIDE)



TYPICAL WALL PANEL

## Johnson County Design No. 820

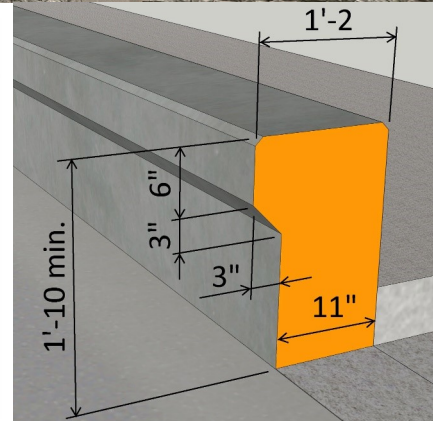
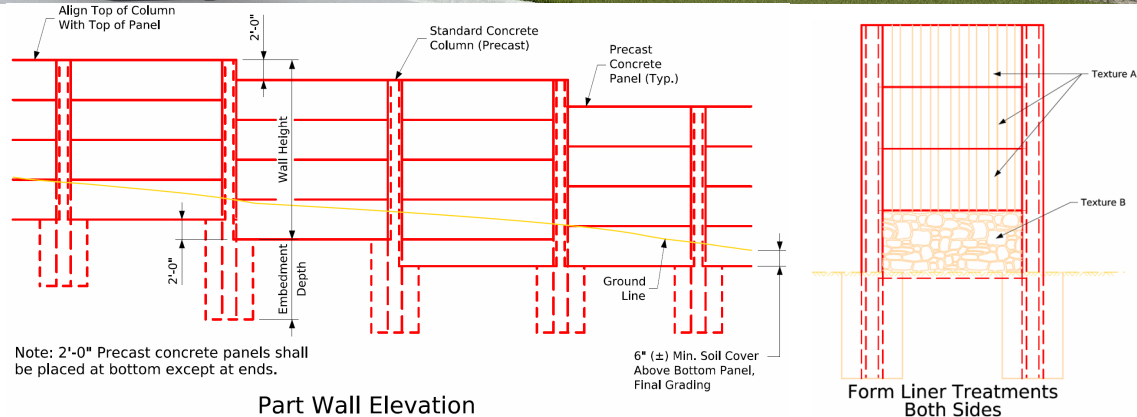
- Project No. NHS-080-6(393)239-11-52
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-380 & I-80 Interchange Area
- 3D model (.skp) available
- Features:
  - Integrally colored and textured precast panels and colored support posts
  - Different form liner textures on each side of panel
  - Categorized as a "view blocking wall" since placement does not meet Federal requirements for noise reduction to adjacent residential properties
- Costs (2020):
  - Precast noise wall \$77.50/SF (single bidder)





# Noise Walls: US 218 Noise Wall, Keokuk, IA

KMO



## Lee County Design No. 125

- Project No. ER-218-1(087)—28-56
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Keokuk Noise Wall US 218
- 3D model (.skp) available
- Features:
  - Integrally colored and textured precast panels and colored support posts
  - Identical textures on both sides
  - Since this wall is inside the clear zone of the US 218 roadway, the project also contains installation of the Low Profile TL-2 barrier at the curb for wall protection; application of the barrier for this purpose is unique, and only 2 other installations of this barrier exist on Iowa projects
- Costs (2025):
  - Precast noise wall \$70/SF (\$76.97/SF avg bid)
  - Low-profile barrier \$105.50/LF (\$116.30/LF avg bid)

