

BLOCK 75 PARKING GARAGE REPAIRS

GENERAL REPAIRS AND STAIRS ENCLOSURES

Public Works Committee Meeting

City Hall, Rapid City, SD

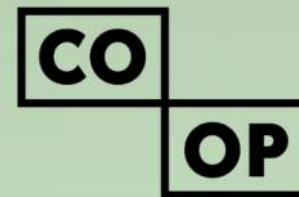
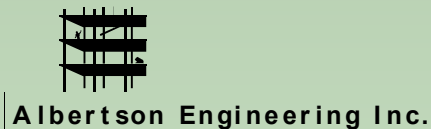
August 30, 2022



Albertson Engineering Inc.

DESIGN TEAM

Stephen Kilber, PE	-	Albertson Engineering, Inc
Gene Fennell, AIA	-	Fennell Design, Inc
Dave Riemenschneider	-	West Plains Engineering, Inc
Matt Von Haden, PE	-	West Plains Engineering, Inc
Aaron Ashley	-	CO-OP Architects
Ian Garduna, PE	-	Renner Associates



Project History

- Parking Lot at Original Site
- Initial Garage: Single Level (1999)



Original Construction



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Project History

- Final Level Addition (2008)



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Project History

- Main St Square (2011)



Main St Square



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Project Repairs: Structural



Underside of 2nd Floor Along Main St Square

Exposed
rebar due to
corrosion



Damaged Spandrel on North Wall of Ramp



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Project Repairs: Structural

Failed
"sandwich
plate"



"Sandwich Plate" Joint

Exposed
rebar due to
corrosion



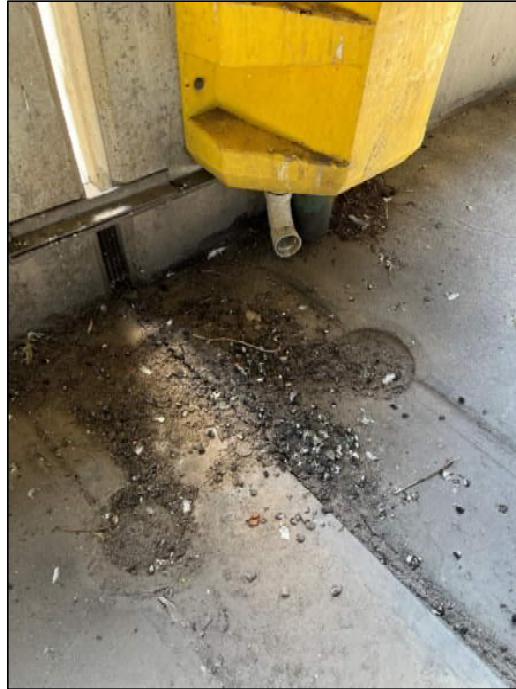
Damaged Column at East Stairs



Project Repairs: Mechanical



Rusting at Bend in Drain Pipe



Clogged Slab Drains



Completely Rusted Downspout



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WPE WEST
PLAINS
ENGINEERING, INC.

Project Repairs: Electrical



Corroded Electrical Conduit



Primary Mechanical Closet



Service Panel Inside Cabinet



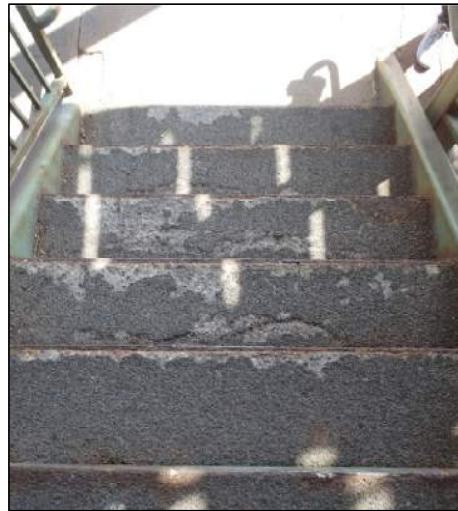
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WPE WEST
PLAINS
ENGINEERING, INC.

Project Repairs: Stairways



Rusted Stair Pans Typical Throughout



Damaged Concrete Pans



Corroded Stringers and Stair Pans



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Tread Wear Progression



New Construction

Stairs at Pennington Co.
Cast in 2011, Enclosed in 2013



15 Years Old (2013)



23 Years Old (2022)



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Proposed Stairway Enclosures

- Mitigate Slip, Trip, and Fall Potential
- Better Protection From Environment
- Extend Life of Stair Repairs
- Reduces Future Maintenance



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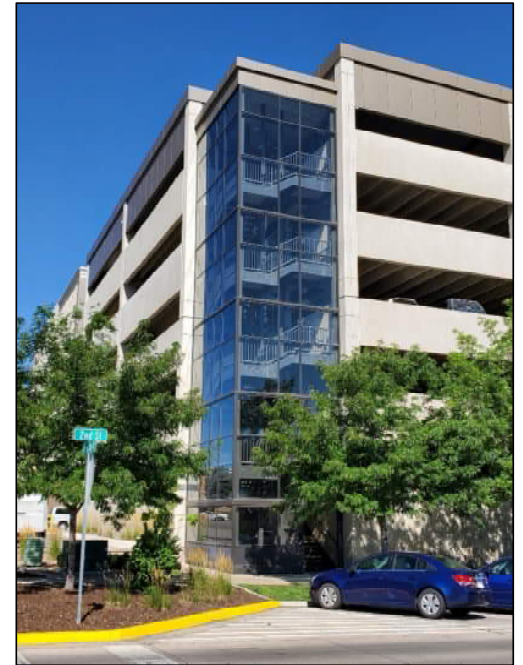
Project Comparison

Proposed Stair Enclosure

- Similar to Pennington County Garage
- Have “Open” Feel Users
- Minimal Opportunities for Loitering



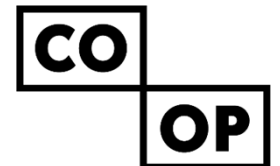
Block 75 Garage Stairs



Pennington Co Garage Stairs



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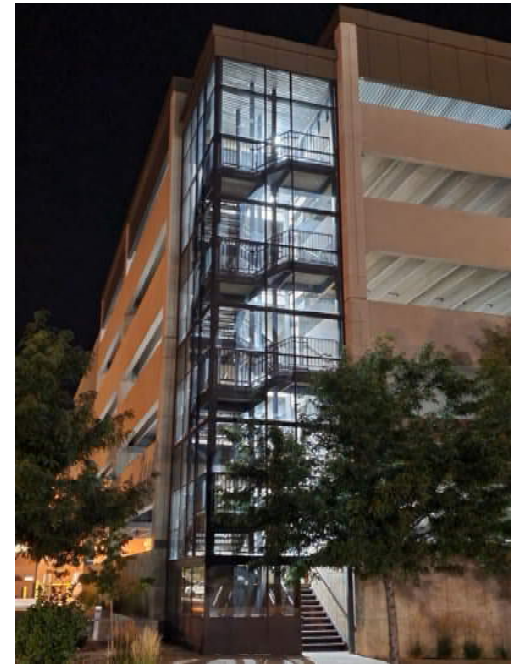
Project Comparison - Night

Proposed Stair Enclosure

- Similar to Pennington County Garage
- Have “Open” Feel Users
- Minimal Opportunities for Loitering



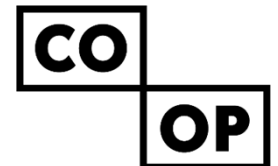
Block 75 Garage Stairs



Pennington Co Garage Stairs



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BLOCK 75 PARKING GARAGE REPAIRS

6TH STREET LOOKING NORTHEAST

8-26-2022



BLOCK 75 PARKING GARAGE REPAIRS

5TH STREET LOOKING NORTHWEST

8-26-2022



BLOCK 75 PARKING GARAGE REPAIRS

ALLEY LOOKING NORTHEAST AT 5TH STREET

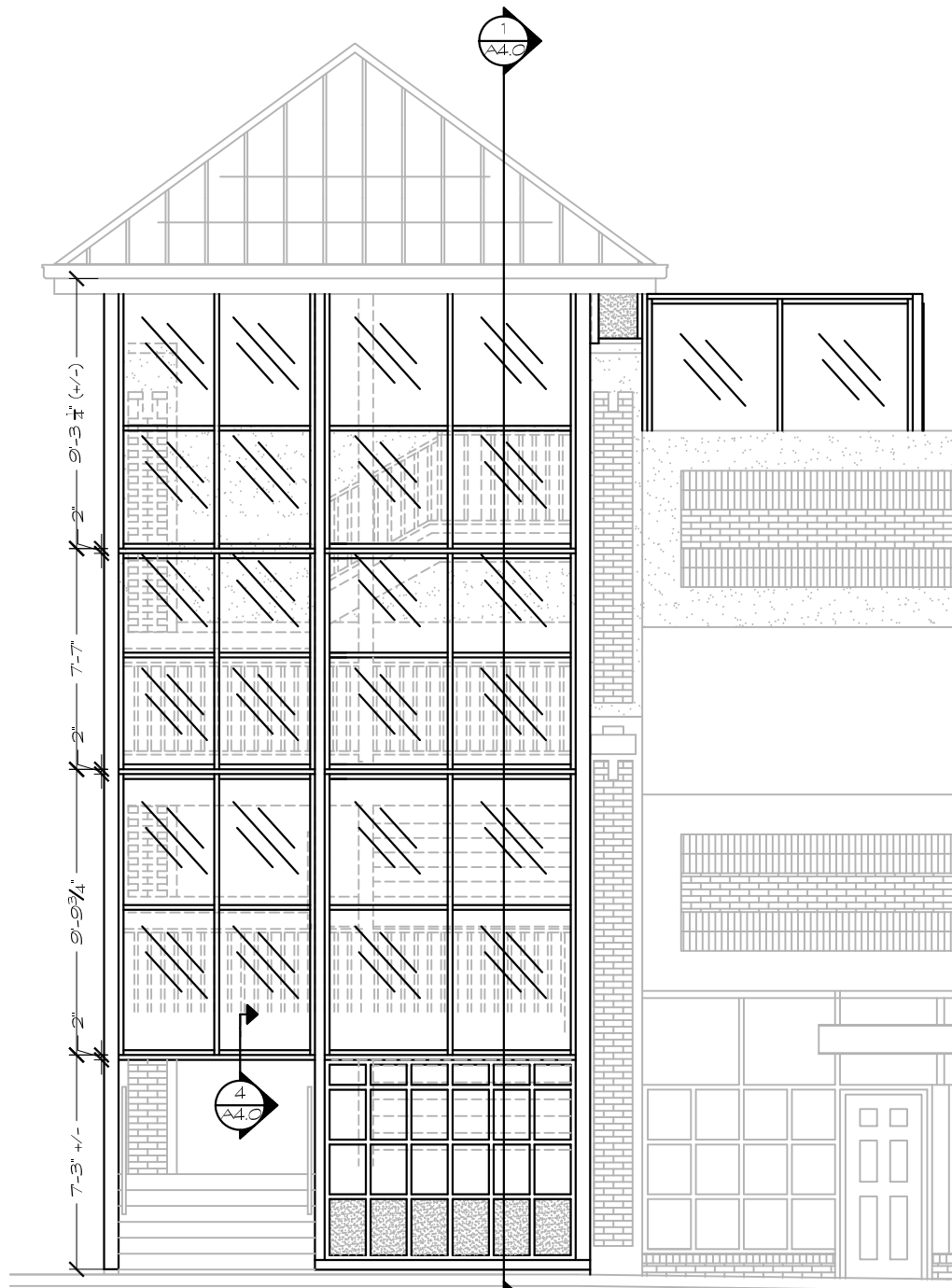
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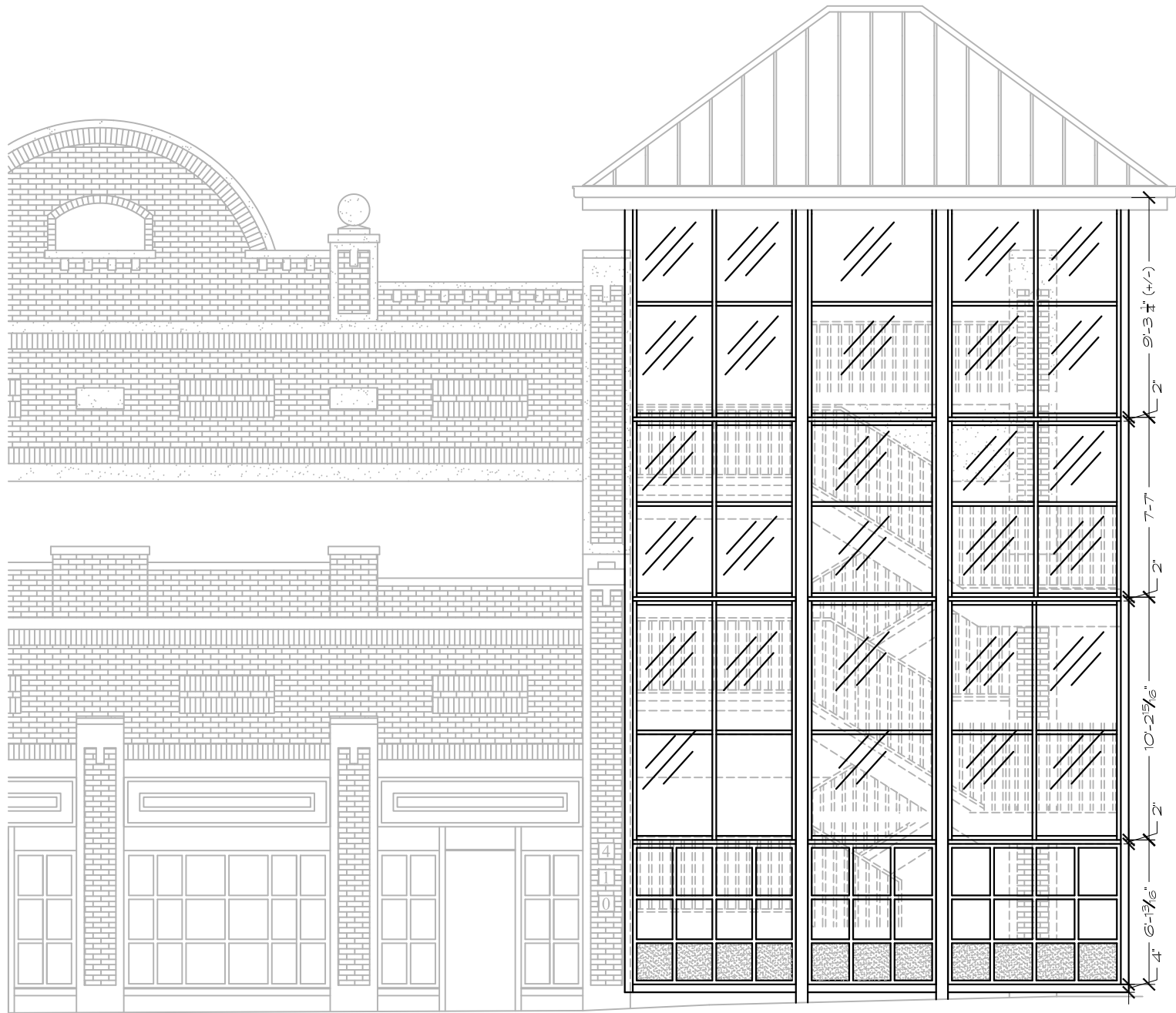
BLOCK 75 PARKING GARAGE REPAIRS

MAIN ST SQUARE LOOKING NORTHWEST AT 6TH STREET

8-26-2022



1 SOUTH ELEVATION
A3.0 SCALE: 1/4" = 1'-0"



2 WEST ELEVATION
 A3.0 SCALE: 1/4" = 1'-0"

Financials

Block 75 Parking Garage Repairs (Estimates)

- Structural Repairs - \$267,000 (~7%)
- Enclosures - \$390,000 (~10%)
- Combined Cost - \$657,000
 - 17% of Overall Project
- Total Project Cost - \$3,940,000

Item	Cost
<i>Structural Items</i>	
Stair Renovations	\$267,111
7000/2000 Product Application	\$514,953
1200 Product Application - Bid Alternate	\$84,830
Joint Repairs	\$97,990
New Steel Framing	\$171,070
Elevated DT Repairs	\$82,178
Precast Repairs	\$88,474
2nd Floor Deck Repairs	\$95,926
Miscellaneous Repairs	\$125,103
<i>Mechanical Items</i>	\$380,350
Replacement of All Drain Inlets and Piping	-
Installation of New Drain Inlets	-
Replacement of Fire Protection Lines	-
<i>Electrical Items</i>	\$490,700
Replacement of All Conduits & J-Boxes	-
Replacement of Damaged Lights	-
Replacement/Relocation of Main Service Panel	-
<i>Architectural Items</i>	\$389,400
Curtain Systems for Stair Enclosures	-
<i>Civil Items*</i>	\$25,042
Drainage Improvements at NW Corner	-
Sub-total=	\$2,813,126
Overhead and Profit (25% of Sub-total)=	\$703,282
Design Contingency (15% of Sub-total)=	\$421,969
Total=	\$3,938,377



Questions?



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