

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

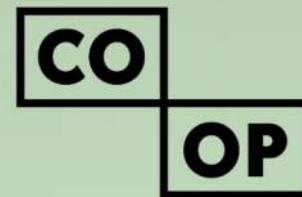
Stephen Kilber, PE	-	Albertson Engineering, Inc
Gene Fennell, AIA	-	Fennell Design, Inc
Dave Riemenschneider	-	West Plains Engineering, Inc
Matt Von Haden, PE	-	West Plains Engineering, Inc
Aaron Ashley	-	CO-OP Architects
Ian Garduna, PE	-	Renner Associates



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WPE WEST
PLAINS
ENGINEERING, INC.



RENNER
ASSOCIATES, LLC
CIVIL ENGINEERING • LAND SURVEYING
RENNERASSOC.COM
3231 TEEWINOT DRIVE, RAPID CITY, SD 57703
PH: 605.741.7310

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



Exposed
rebar due to
corrosion

Underside of 2nd Floor Along Main St Square



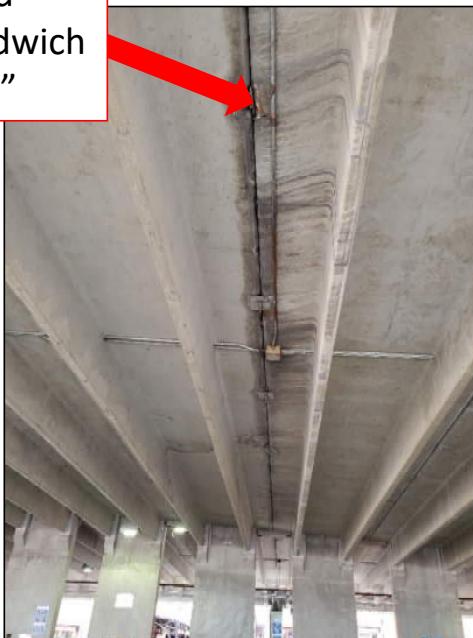
Damaged Spandrel on North Wall of Ramp



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Project Repairs: Structural

Failed
“sandwich
plate”



“Sandwich Plate” Joint

Exposed
rebar due to
corrosion



Damaged Column at East Stairs

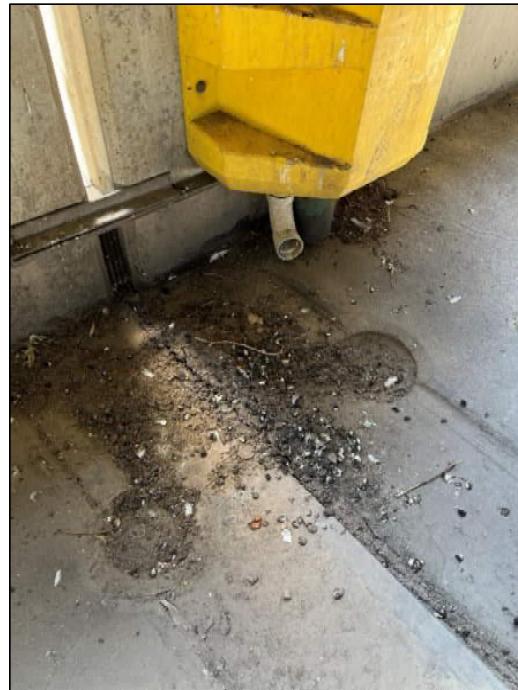


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Project Repairs: Mechanical



Rusting at Bend in Drain Pipe



Clogged Slab Drains



Completely Rusted Downspout



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Project Repairs: Electrical



Corroded Electrical Conduit



Primary Mechanical Closet



Service Panel Inside Cabinet



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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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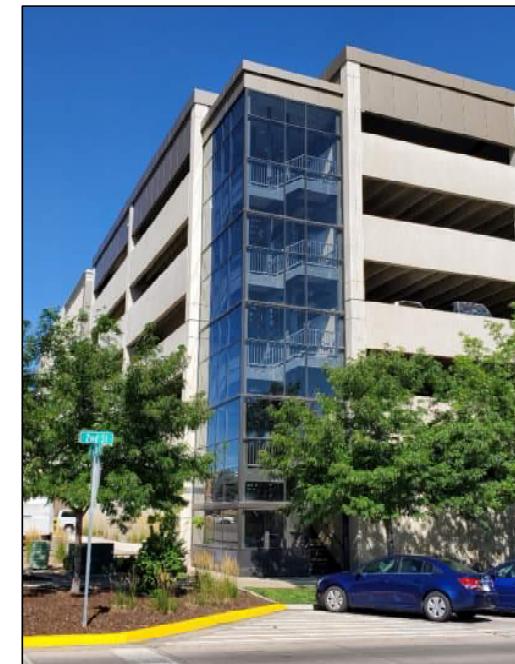
Project Comparison

Proposed Stair Enclosure

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



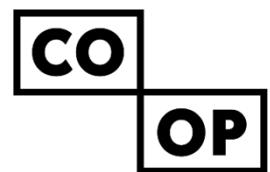
Block 75 Garage Stairs



Pennington Co Garage Stairs



Albertson Engineering Inc.



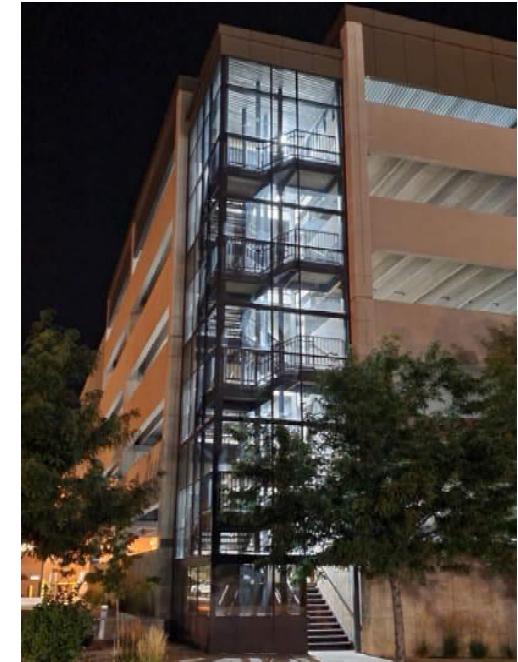
Project Comparison - Night

Proposed Stair Enclosure

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



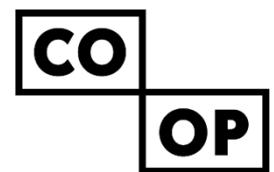
Block 75 Garage Stairs



Pennington Co Garage Stairs



Albertson Engineering Inc.





fennell design inc



Albertson Engineering Inc.

CO
Arch
OP



BLOCK 75 PARKING GARAGE REPAIRS

6TH STREET LOOKING NORTHEAST

8-26-2022



BLOCK 75 PARKING GARAGE REPAIRS

5TH STREET LOOKING NORTHWEST

8-26-2022



fennell design inc



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CO
Arch
OP



BLOCK 75 PARKING GARAGE REPAIRS

ALLEY LOOKING NORTHEAST AT 5TH STREET

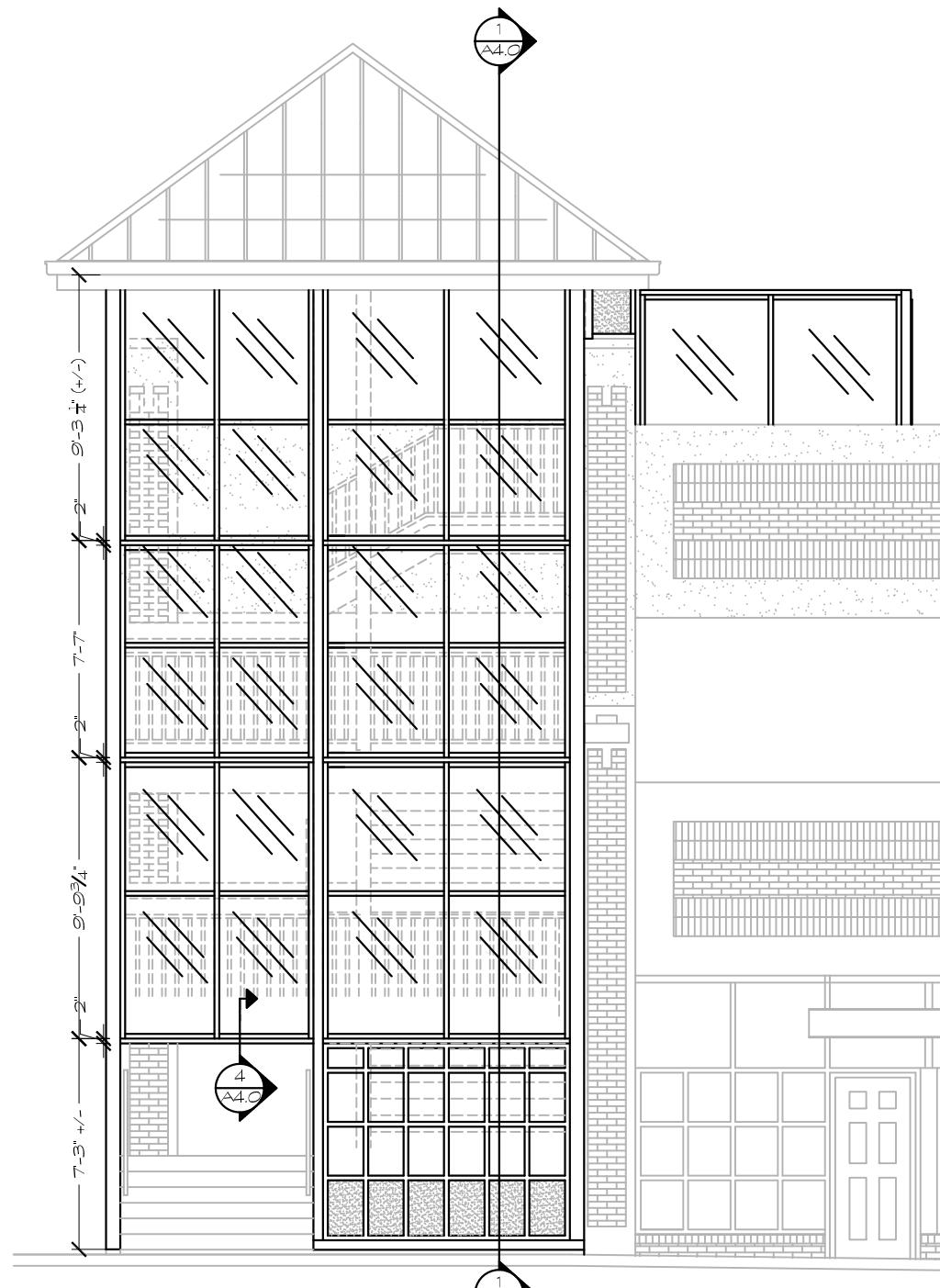
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BLOCK 75 PARKING GARAGE REPAIRS

MAIN ST SQUARE LOOKING NORTHWEST AT 6TH STREET

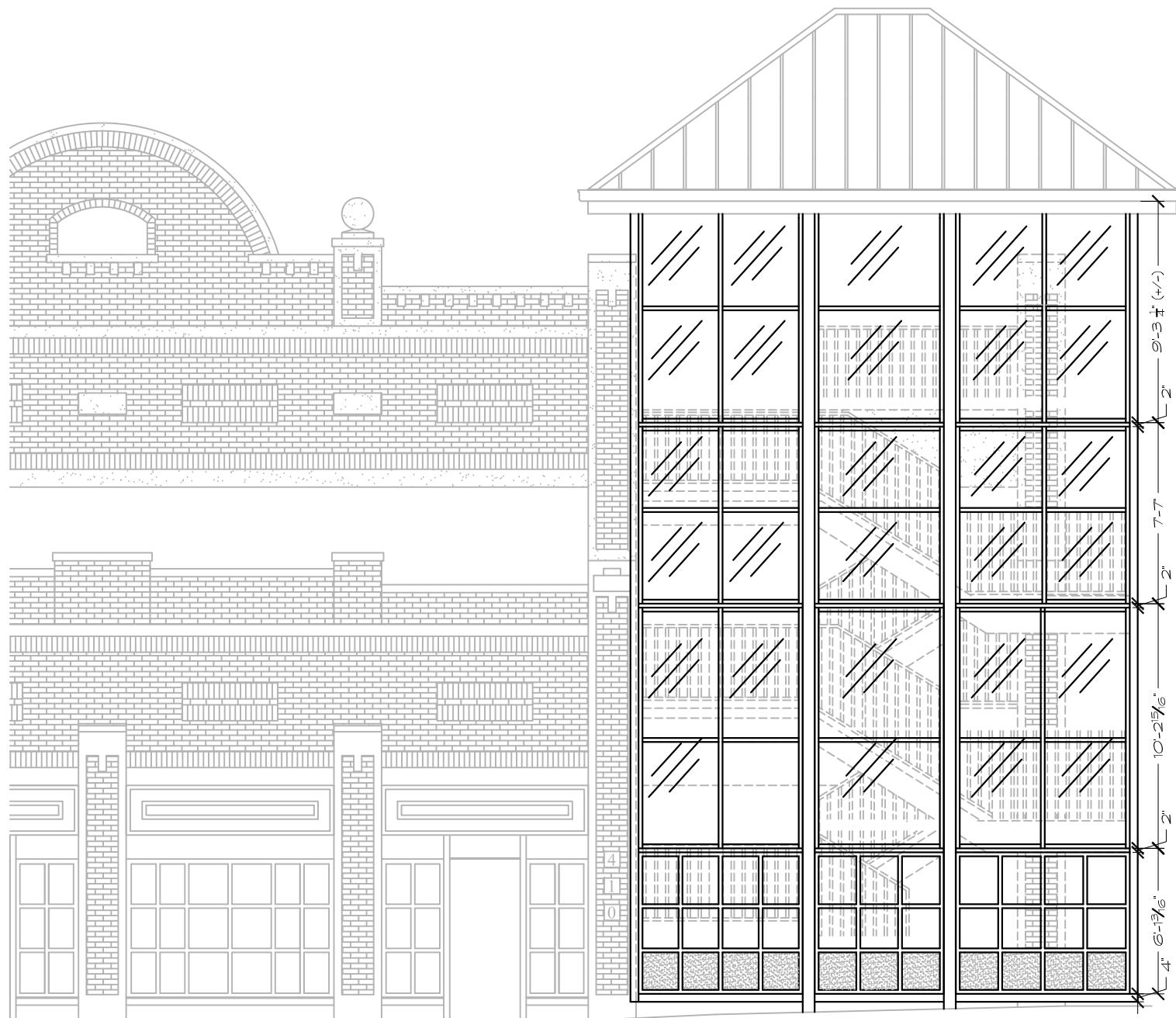
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1
A3.0

SOUTH ELEVATION

SCALE: 1/4" = 1'-0"



2
A3.0

WEST ELEVATION
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>	
Replacement of All Drain Inlets and Piping	\$380,350
Installation of New Drain Inlets	-
Replacement of Fire Protection Lines	-
<i>Electrical Items</i>	
Replacement of All Conduits & J-Boxes	\$490,700
Replacement of Damaged Lights	-
Replacement/Relocation of Main Service Panel	-
<i>Architectural Items</i>	
Curtain Systems for Stair Enclosures	\$389,400
<i>Civil Items*</i>	
Drainage Improvements at NW Corner	\$25,042
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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