

**2015 ROUTINE
BRIDGE INSPECTION REPORT**



**BRIDGE # 62567
CSAH 58(EDGERTON) over PHALEN BL. BUSH; UP RR**

DISTRICT: Metro

COUNTY: Ramsey

CITY/TOWNSHIP: St Paul

Date(s) of Inspection: 10/07/2015

Equipment Used:

Owner: County Highway Agency

Inspected By: Engel, Michael; Lee, Joseph; Schaaf, Jerry

Report Written By: Joseph Lee

Report Reviewed By: Glenn Pagel

Final Report Date: 12/30/2015

**MnDOT Bridge Office
3485 Hadley Avenue North
Oakdale, MN 55128**



MnDOT Structure Inventory Report

Bridge ID: 62567

CSAH 58(EDGERTON)

over PHALEN BL. BUSH; UP RR

Date: 12/30/2015

| GENERAL | |
|-------------------------|----------------------------|
| Agency Br. No. | |
| District | Metro |
| Maint. Area | Crew |
| County | 062 - Ramsey |
| City | St Paul |
| Township | |
| Desc. Loc. | 0.2 MI N OF JCT PAYNE AV |
| Sect., Twp., Range | 29 - 029N - 22W |
| Latitude | Deg 44 Min 57 Sec 54.59 |
| Longitude | Deg 93 Min 4 Sec 33.92 |
| Custodian | 02 - County Highway Agency |
| Owner | 02 - County Highway Agency |
| BMU Agreement | |
| Year Built | 1998 |
| MN Year Reconstructed | |
| FHWA Year Reconstructed | |
| MN Temporary Status | |
| Bridge Plan Location | 4 - MUNICIPAL |
| Date Opened to Traffic | |
| On-Off System | 1 - ON |
| Legislative District | 66A |

| STRUCTURE | |
|-------------------|---|
| Service On | 5 - Highway-pedestrian |
| Service Under | 4 - Highway - railroad |
| Main Span Type | 5 - Prestress or Precast 01 - Beam Span |
| Main Span Detail | |
| Appr. Span Type | |
| Appr. Span Detail | |
| Skew | 0 |
| Culvert Type | |
| Barrel Length | ft. |
| Cantilever ID | |

| NUMBER OF SPANS | |
|-----------------------------|---------------------------------|
| MAIN: 6 | APPR: 0 TOTAL: 6 |
| Main Span Length | 68.0 ft. |
| Structure Length | 412.9 ft. |
| Deck Width (Out-to-Out) | 58.3 ft. |
| Deck Material | 1 - Concrete Cast-in-Place |
| Wear Surf Type | 1 - Monolithic Concrete (concr. |
| Wear Surf Install Year | |
| Wear Course/Fill Depth | 0.17 ft. |
| Deck Membrane | 0 - None |
| Deck Rebars | 1 - Epoxy Coated Reinforcing |
| Deck Rebars Install Year | 1998 |
| Structure Area (Out-to-Out) | 24072 sq. ft. |
| Roadway Area (Curb-to-Curb) | 16512 sq. ft. |
| Sidewalk Width | Lt 8.00 ft. Rt 8.00 ft. |
| Curb Height | Lt 0.67 ft. Rt 0.67 ft. |
| Rail Type | Lt 28 Rt 28 |

| ROADWAY | |
|-----------------------------|-----------------------------|
| Bridge Match ID (TIS) | 1 |
| Roadway O/U Key | Route On Structure |
| Route Sys | 04 - CSAH Number 58 |
| Roadway Name or Description | CSAH 58 |
| Level of Service | 1 - MAINLINE |
| Roadway Type | 2 - 2-way traffic |
| Control Section (TH Only) | |
| Reference Point | 000+00.800 |
| Detour Length | 1.0 mi |
| Lanes | On 2 Under 2 |
| | ADT 4950 Year 2005 |
| HCACT | 0 ADTT 0 % |
| Functional Class | 16 - Urban - Minor Arterial |

| RDWY DIMENSIONS | | | |
|------------------------|-----------|-------|-----|
| If Divided | NB-EB | SB-WB | |
| Roadway Width | 40.00 ft. | | ft. |
| Vertical Clearance | | | ft. |
| Max. Vert. Clear. | | | ft. |
| Horizontal Clear. | 39.9 ft. | | ft. |
| Lateral Clearance | | | ft. |
| Appr. Surface Width | 40.0 ft. | | |
| Bridge Roadway Width | 40.0 ft. | | |
| Median Width On Bridge | | | ft. |

| MISC. BRIDGE DATA | |
|---------------------|---------------------------|
| Structure Flared | 0 - No flare |
| Parallel Structure | N - No parallel structure |
| Field Conn. ID | |
| Abutment Foundation | 8 - CIP |
| (Material/Type) | 3 - FTG PILE |
| Pier Foundation | 8 - CIP |
| (Material/Type) | 3 - FTG PILE |
| Historic Status | 5 - Not eligible |

| PAINT | |
|-----------------|-----------|
| Year Painted | |
| Unsound Paint % | |
| Painted Area | 0 sq. ft. |
| Primer Type | |
| Finish Type | |

| BRIDGE SIGNS | |
|--------------|--------------------|
| Posted Load | 0 - Not Required |
| Traffic | 0 - Not Required |
| Horizontal | 0 - Not Required |
| Vertical | N - Not Applicable |

| INSPECTION | |
|-----------------------------------|------------------|
| Userkey | 199 |
| Unofficial Structurally Deficient | N |
| Unofficial Functionally Obsolete | N |
| Unofficial Sufficiency Rating | 93.0 |
| Routine Inspection Date | 10/07/2015 |
| Routine Inspection Frequency | 24 |
| Inspector Name | City of St. Paul |
| Status | A - Open |

| NBI CONDITION RATINGS | |
|-----------------------|-------------------------|
| Deck | 7 - Good Condition |
| Unsound Deck % | |
| Superstructure | 8 - Very Good Condition |
| Substructure | 9 - Excellent Condition |
| Channel | N - Not Applicable |
| Culvert | N - Not Applicable |

| NBI APPRAISAL RATINGS | |
|-----------------------|-------------------------------|
| Structure Evaluation | 6 |
| Deck Geometry | 6 |
| Underclearances | 6 |
| Water Adequacy | N - Not Applicable |
| Approach Alignment | 9 - Superior to present desir |

| SAFETY FEATURES | |
|-----------------|---------------------|
| Bridge Railing | 1 - MEETS STANDARDS |
| GR Transition | 1 - MEETS STANDARDS |
| Appr. Guardrail | 1 - MEETS STANDARDS |
| GR Termini | N - NOT REQUIRED |

| IN DEPTH INSP. | | | |
|----------------|-----|------|------|
| | Y/N | Freq | Date |
| Frac. Critical | | | |
| Underwater | | | |
| Pinned Asbly. | | | |
| Spec. Feat. | | | |

| WATERWAY | |
|-------------------------------------|-------------------------------|
| Drainage Area (sq. mi.) | |
| Waterway Opening | sq. ft. |
| Navigation Control | N - Not applicable, no waterw |
| Pier Protection | |
| Nav. Clr. (ft.) | Vert. ft. Horiz. ft. |
| Nav. Vert. Lift Bridge Clear. (ft.) | |
| MN Scour Code | A - NON WATER' Year |

| CAPACITY RATINGS | |
|--------------------|------------------------|
| Design Load | 9 - HS 25 (OR GREATER) |
| Operating Rating | 1 - LF (LF) HS 25.6 |
| Inventory Rating | 1 - LF (LF) HS 15.3 |
| Posting VEH: | SEMI: DBL: |
| Rating Date | 03/31/2015 |
| MnDOT Permit Codes | |
| A: | N - N/A |
| B: | N - N/A |
| C: | N - N/A |

MnDOT BRIDGE INSPECTION REPORT

12/30/2015

Inspector: City of St. Paul

BRIDGE 62567 CSAH 58(EDGERTON) OVER PHALEN BL. BUSH; UP RR ROUTINE INSP. DATE: 10/07/2015

| | | |
|--|--|---|
| County: Ramsey | Location: 0.2 MI N OF JCT PAYNE AV | Length: 412.9 ft. |
| City: St Paul | Route: 04 - CSAH 58 Ref. Pt.: 000+00.800 | Deck Width: 58.3 ft. |
| Township: | Control Section: | Rdwy. Area/ Pct. Unsnd: 16512 sq. ft. / % |
| Section: 29 Township: 029N Range: 22W Maint. Area: | | Paint Area/ Pct. Unsnd: 0 sq. ft. / % |
| Span Type: 5 - Prestressed Concrete 02 - | Local Agency Bridge Nbr.: | Culvert: N/A |
| List: Stringer/Multi-beam or Girder | | Postings: |
| NBI Deck: 7 Super: 8 Sub: 9 Chan: N Culv: N | | |
| | Open, Posted, Closed: A - Open | |
| | MN Scour Code: A - NON WATERWAY | |

| | | |
|--|------------------------------|-------------------------------------|
| Appraisal Ratings - Approach: 9 Waterway: N | | Unofficial Structurally Deficient N |
| Required Bridge Signs - Load Posting: 0 - Not Required | Traffic: 0 - Not Required | Unofficial Functionally Obsolete N |
| Horizontal: 0 - Not Required | Vertical: N - Not Applicable | Unofficial Sufficiency Rating 93.0 |

Structure Unit:

| ELEM NBR | ELEMENT NAME | ENV | REPORT TYPE | INSP. DATE | QUANTITY | QTY CS 1 | QTY CS 2 | QTY CS 3 | QTY CS 4 | QTY CS 5 |
|----------|-------------------------------------|-----|-------------|------------|----------|----------|----------|----------|----------|----------|
| 109 | Prestressed Concrete Girder or Beam | 2 | Routine | 10/07/2015 | 2441 LF | 2440 | 1 | 0 | 0 | N/A |
| | | | Routine | 10/07/2013 | 2441 LF | 2441 | 0 | 0 | 0 | N/A |

Requires Monitoring Monitored

Notes: There are soot stains from trains under the railroad span. 07-15
 Minor impact damage at the E.side fascia beam, over Bush St. 1' in CS-2 2015

| | | | | | | | | | | |
|-----|----------------------------|---|---------|------------|-------|---|---|---|---|-----|
| 205 | Reinforced Concrete Column | 1 | Routine | 10/07/2015 | 10 EA | 9 | 1 | 0 | 0 | N/A |
| | | | Routine | 10/07/2013 | 10 EA | 9 | 1 | 0 | 0 | N/A |

Requires Monitoring Monitored

Notes: The second pier from the north end has minor construction damage to the east column. 03-08.
 The 1st and 2nd pier from the north end has several small spalls from poor aggregate. 07-11.
 The 2nd pier from the north end has small construction damage. 2010-15

| | | | | | | | | | | |
|-----|-------------------------------|---|---------|------------|-------|----|---|---|---|-----|
| 210 | Reinforced Concrete Pier Wall | 4 | Routine | 10/07/2015 | 48 LF | 48 | 0 | 0 | 0 | N/A |
| | | | Routine | 10/07/2013 | 48 LF | 48 | 0 | 0 | 0 | N/A |

Requires Monitoring Monitored

Notes: need photos

| | | | | | | | | | | |
|-----|------------------------------|---|---------|------------|--------|-----|---|---|---|-----|
| 215 | Reinforced Concrete Abutment | 2 | Routine | 10/07/2015 | 121 LF | 121 | 0 | 0 | 0 | N/A |
| | | | Routine | 10/07/2013 | 121 LF | 121 | 0 | 0 | 0 | N/A |

Requires Monitoring Monitored

Notes: Northside abut. has minor diagonal cracks on both sides. 2010-15

Structure Unit:

| ELEM NBR | ELEMENT NAME | ENV | REPORT TYPE | INSP. DATE | QUANTITY | QTY CS 1 | QTY CS 2 | QTY CS 3 | QTY CS 4 | QTY CS 5 |
|---|---|-----|--|------------|----------|------------------------------------|-------------|-------------|-------------|-------------|
| 234 | Reinforced Concrete Pier Cap | 1 | Routine | 10/07/2015 | 285 LF | 285 | 0 | 0 | 0 | N/A |
| | | | Routine | 10/07/2013 | 7 LF | 7 | 0 | 0 | 0 | N/A |
| | | | <input type="checkbox"/> Requires Monitoring | | | <input type="checkbox"/> Monitored | | | | |
| Notes: Pier 5 cantilevers are cracked at the outside edge of pier columns. 2015 Quantity = 5 piers X 57' each = 285 LF total 2015 | | | | | | | | | | |
| 300 | Strip Seal Deck Joint | 2 | Routine | 10/07/2015 | 112 LF | 112 | 0 | 0 | N/A | N/A |
| | | | Routine | 10/07/2013 | 112 LF | 112 | 0 | 0 | N/A | N/A |
| | | | <input type="checkbox"/> Requires Monitoring | | | <input type="checkbox"/> Monitored | | | | |
| Notes: Joints need cleaning. 2011-15 | | | | | | | | | | |
| 301 | Poured Deck Joint | 2 | Routine | 10/07/2015 | 303 LF | 303 | 0 | 0 | N/A | N/A |
| | | | Routine | 10/07/2013 | | | | | | |
| | | | <input type="checkbox"/> Requires Monitoring | | | <input type="checkbox"/> Monitored | | | | |
| Notes: Added element in 2015. | | | | | | | | | | |
| 311 | Expansion Bearing | 2 | Routine | 10/07/2015 | 72 EA | 72 | 0 | 0 | N/A | N/A |
| | | | Routine | 10/07/2013 | 72 EA | 72 | 0 | 0 | N/A | N/A |
| | | | <input type="checkbox"/> Requires Monitoring | | | <input type="checkbox"/> Monitored | | | | |
| Notes: Some elastomeric bearing pads are tipped 7/8" N. at 62 degrees F at the south abutment. 08-10. Other south abutment bearings are 1/2" out of plumb to the north. The temperature is 62 deg. F. 08-10. Expansion Bearing Total = 72 see sheet 21 of 50 (2013) | | | | | | | | | | |
| 313 | Fixed Bearing | 2 | Routine | 10/07/2015 | 24 EA | 24 | 0 | 0 | N/A | N/A |
| | | | Routine | 10/07/2013 | 24 EA | 24 | 0 | 0 | N/A | N/A |
| | | | <input type="checkbox"/> Requires Monitoring | | | <input type="checkbox"/> Monitored | | | | |
| Notes: Fixed Bearing Total = 16 Located at pier 2 and pier 3. 2013 | | | | | | | | | | |
| 321 | Concrete Approach Slab-Concrete Wearing Surface | 2 | Routine | 10/07/2015 | 2 EA | 1 | 1 | 0 | 0 | N/A |
| | | | Routine | 10/07/2013 | 2 EA | 1 | 1 | 0 | 0 | N/A |
| | | | <input type="checkbox"/> Requires Monitoring | | | <input type="checkbox"/> Monitored | | | | |
| Notes: At the N.end manhole there is a one sq. ft. of spalled concrete. 2013-15 Minor to moderate deterioration of the N.approach. 2015 Moderate cracking is present. Recommend sealing of all cracks. 2015 | | | | | | | | | | |

Structure Unit:

| ELEM NBR | ELEMENT NAME | ENV | REPORT TYPE | INSP. DATE | QUANTITY | QTY CS 1 | QTY CS 2 | QTY CS 3 | QTY CS 4 | QTY CS 5 |
|-------------|---|---|-------------|------------------------------------|----------|-------------|-------------|-------------|-------------|-------------|
| 333 | Masonry, Other or Combination Material Railing | 1 | Routine | 10/07/2015 | 1020 LF | 1020 | 0 | 0 | N/A | N/A |
| | | | Routine | 10/07/2013 | 1020 LF | 1020 | 0 | 0 | N/A | N/A |
| | | <input type="checkbox"/> Requires Monitoring | | <input type="checkbox"/> Monitored | | | | | | |
| | | Notes: Parapet, W.side has longitudinal cracking. 2013 Minor impact damage at the SW corner bridge rail. 2015 | | | | | | | | |
| 334 | Metal Bridge Railing (Coated or Painted) | 2 | Routine | 10/07/2015 | 1020 LF | 820 | 200 | 0 | 0 | 0 |
| | | | Routine | 10/07/2013 | 1020 LF | 1020 | 0 | 0 | 0 | 0 |
| | | <input type="checkbox"/> Requires Monitoring | | <input type="checkbox"/> Monitored | | | | | | |
| | | Notes: Paint system is showing the primer coat through out. Recommend painting. 2015 Minor deterioration present. CS-2 2015 | | | | | | | | |
| 358 | Concrete Deck Cracking Smart Flag | 2 | Routine | 10/07/2015 | 1 EA | 0 | 1 | 0 | 0 | N/A |
| | | | Routine | 10/07/2013 | 1 EA | 1 | 0 | 0 | 0 | N/A |
| | | <input type="checkbox"/> Requires Monitoring | | <input type="checkbox"/> Monitored | | | | | | |
| | | Notes: Wearing surface has unsealed cracks of moderate size or density. 2015 | | | | | | | | |
| 359 | Underside of Concrete Deck Smart Flag | 2 | Routine | 10/07/2015 | 1 EA | 1 | 0 | 0 | 0 | 0 |
| | | | Routine | 10/07/2013 | 1 EA | 1 | 0 | 0 | 0 | 0 |
| | | <input type="checkbox"/> Requires Monitoring | | <input type="checkbox"/> Monitored | | | | | | |
| | | Notes: There are a few transverse cracks with leaching in all spans. 07-15 There is a slight soot stain from trains under the railroad span. 07-08 Minor cracking and light leaching present. 2013-15 | | | | | | | | |
| 377 | Low Slump O/L (Concrete Deck with Epoxy Rebar) | 2 | Routine | 10/07/2015 | 16342 SF | 0 | 16342 | 0 | 0 | 0 |
| | | | Routine | 10/07/2013 | 16342 SF | 16342 | 0 | 0 | 0 | 0 |
| | | <input type="checkbox"/> Requires Monitoring | | <input type="checkbox"/> Monitored | | | | | | |
| | | Notes: Changed LS overlay quantity to 16,342 SF. see attached plan sheet 2013 The combined area of unsound wearing surface is 2% or less than the total deck area. 2015 | | | | | | | | |
| 380 | Secondary Structural Elements | 2 | Routine | 10/07/2015 | 1 EA | 1 | 0 | 0 | 0 | N/A |
| | | | Routine | 10/07/2013 | 1 EA | 1 | 0 | 0 | 0 | N/A |
| | | <input type="checkbox"/> Requires Monitoring | | <input type="checkbox"/> Monitored | | | | | | |
| | | Notes: Changed quantity to 1 Total. 2013 80 steel diaphragms + 10 concrete diaphragms Crash struts are located at the railroad track areas. 2015 | | | | | | | | |

Structure Unit:

| ELEM NBR | ELEMENT NAME | ENV | REPORT TYPE | INSP. DATE | QUANTITY | QTY CS 1 | QTY CS 2 | QTY CS 3 | QTY CS 4 | QTY CS 5 |
|-------------|------------------------------|-----|-------------|------------|----------|-------------|-------------|-------------|-------------|-------------|
| 387 | Reinforced Concrete Wingwall | 2 | Routine | 10/07/2015 | 4 EA | 3 | 1 | 0 | 0 | N/A |
| | | | Routine | 10/07/2013 | 4 EA | 3 | 1 | 0 | 0 | N/A |

 Requires Monitoring Monitored

Notes: There is moderate map cracking of the west wing of the north abutment. 06-15

| | | | | | | | | | | |
|-----|---|---|---------|------------|------|---|---|---|---|-----|
| 418 | Masonry, Other or Combination Material Wingwall | 1 | Routine | 10/07/2015 | 1 EA | 0 | 0 | 1 | 0 | N/A |
| | | | Routine | 10/07/2013 | 1 EA | 0 | 0 | 1 | 0 | N/A |

 Requires Monitoring Monitored

Notes: The masonry wall at the northeast approach area is falling apart on the top 1 ft. for a 10 ft. length. 07-15

| | | | | | | | | | | |
|-----|-----------------------------|---|---------|------------|------|---|---|-----|-----|-----|
| 964 | Critical Finding Smart Flag | 2 | Routine | 10/07/2015 | 1 EA | 1 | 0 | N/A | N/A | N/A |
| | | | Routine | 10/07/2013 | 1 EA | 1 | 0 | N/A | N/A | N/A |

 Requires Monitoring MonitoredNotes: Date 2003-10-16 -
Previous comments > DO NOT DELETE THIS CRITICAL FINDING SMART FLAG.

| | | | | | | | | | | |
|-----|--------------------|---|---------|------------|------|---|---|---|-----|-----|
| 982 | Approach Guardrail | 2 | Routine | 10/07/2015 | 1 EA | 1 | 0 | 0 | N/A | N/A |
| | | | Routine | 10/07/2013 | | | | | | |

 Requires Monitoring MonitoredNotes: Added element in 2015.
NW, NE, SE - 2015

| | | | | | | | | | | |
|-----|--------------------------|---|---------|------------|------|---|---|---|-----|-----|
| 984 | Deck & Approach Drainage | 2 | Routine | 10/07/2015 | 1 EA | 1 | 0 | 0 | N/A | N/A |
| | | | Routine | 10/07/2013 | | | | | | |

 Requires Monitoring MonitoredNotes: Aded element in 2015.
Deck water drains to the South and to the North off of the bridge. 2015

| | | | | | | | | | | |
|-----|---------------------------|---|---------|------------|------|---|---|---|-----|-----|
| 985 | Slopes & Slope Protection | 2 | Routine | 10/07/2015 | 1 EA | 1 | 0 | 0 | N/A | N/A |
| | | | Routine | 10/07/2013 | 1 EA | 1 | 0 | 0 | N/A | N/A |

 Requires Monitoring Monitored

Notes: Previous comments > < none >

Structure Unit:

| ELEM NBR | ELEMENT NAME | ENV | REPORT TYPE | INSP. DATE | QUANTITY | QTY CS 1 | QTY CS 2 | QTY CS 3 | QTY CS 4 | QTY CS 5 |
|-------------|-----------------|-----|-------------|------------|----------|-------------|-------------|-------------|-------------|-------------|
| 986 | Curb & Sidewalk | 2 | Routine | 10/07/2015 | 1 EA | 0 | 1 | 0 | N/A | N/A |
| | | | Routine | 10/07/2013 | 1 EA | 1 | 0 | 0 | N/A | N/A |

 Requires Monitoring Monitored

Notes: East sidewalk has a longitudinal crack 2.5' from the wall, runs the length of the bridge. 2013-15
Cracks on walk are unsealed. Any existing sealant has failed. 2015

| | | | | | | | | | | |
|-----|---------------------|---|---------|------------|------|---|---|---|-----|-----|
| 988 | Miscellaneous Items | 1 | Routine | 10/07/2015 | 1 EA | 1 | 0 | 0 | N/A | N/A |
| | | | Routine | 10/07/2013 | 1 EA | 1 | 0 | 0 | N/A | N/A |

 Requires Monitoring Monitored

Notes: The N.E. stone retaining wall needs tuckpointing. 98-15
Lighting is in the concrete bridge rail on the West and East sides. 2015

General Notes: UP-RR contact:
Mark Watlington (651) 552-3934 cell (1402) 570-6947 mwwatlin@up.com

58. Deck NBI: Minor cracking and leaching is present. 2015

36A. Brdg Railings NBI:

36B. Transitions NBI:

36C. Appr Guardrail NBI:

36D. Appr Guardrail
Terminal NBI:

59. Superstructure NBI: Minor isolated deterioration. 2015
Minor impact damage. see element 109. 2015

60. Substructure NBI:

61. Channel NBI:

62. Culvert NBI:

71. Waterway Adeq NBI:

72. Appr Roadway
Alignment NBI:

Inventory Notes:

Joseph Lee
Inspector's Signature

Glenn Pagel
Reviewer's Signature



1. approach NE.side_1.jpg



2. E.side_1.jpg



3. guardrail NE_1-1.jpg



4. guardrail NE_1-2.jpg



5. underdeck_1-1.jpg



6. underdeck_1-2.jpg



7. underdeck_1-3.jpg



8. underdeck_1-4.jpg



9. underdeck_1-5.jpg



10. wingwall NE.jpg



11. 10-15-13 063.jpg



12. 10-15-13 066.jpg



13. 10-15-13 067.jpg



14. 10-15-13 068.jpg



15. 10-15-13 069.jpg



16. 10-15-13 070.jpg



17. 10-15-13 071.jpg



18. 10-15-13 072.jpg



19. 10-15-13 073.jpg



20. 10-15-13 074.jpg



21. 10-15-13 075.jpg



22. 10-15-13 076.jpg



23. 10-15-13 079.jpg



24. 10-15-13 080.jpg



25. 024 SE corner paint failure on railing..JPG



26. 025 NE corner paint failure on railing..JPG



27. 026 N approach unsealed cracks..JPG



28. 027 SW parapet collision damage..JPG



29. 029 Deck cracking smart flag..JPG



30. 031 E facia girder minor collision damage from traveling W bound on Bush..JPG



31. pier 5_se-1.JPG



32. pier 5_sw-1.JPG