ITEM 202 – PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

- Include parapets, fence, deck sections for expansion joints, tops/backwalls, expansion joints, guardrail and any other appurtenances to complete work as described, etc.

LUMP SUM

ITEM 509 – EPOXY COATED REINFORCING STEEL

Superstructure (Parapet) Total (lbs); T_{SUPER} = **13154.00**

Backwall Total (lbs); $T_{BACKWALL}$ = 1043 + 1698 = **2741.000**

TOTAL WEIGHT OF REINFORCING STEEL (LB); T = T_{SUPER} + $T_{BACKWALL}$ = 15895.000

ITEM 510 – DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT

EXPANSION JOINT REPLACEMENT:

Length of deck along joint (ft); L_{D_EXP} = 96.0 / COS(24.12) = 105.18

2 dowels per location; n = 2

No. dowel holes along abut (ea); $N_{exp\ jt}$ = 106 × n × 2= **424.000**

PARAPET REPLACEMENT:

No. Y501 bars along parapets (ea); N_{PAR} = 1530

LIGHT PILASTERS:

Number of locations (EA); L_{N_LP} = 3 LIGHTS = 3.0

4 holes at each location

No. dowel holes along pilasters (ea); N_{LP} = 4 × 3 = **12.000**

TOTAL DOWEL HOLES (EA); $\mathbf{T_{510} = (N_{exp\ jt} + N_{PAR} + N_{LP}) = \underline{1966.000}}$

ITEM 511 – CLASS QC2 CONCRETE, BRIDGE DECK

Portions of deck required to place expansion joints.

Length of deck along joint (ft); L_{D_EXP} = 96.0 / COS(24.12) = **105.183**

Thickness of deck (ft); h_{deck} = 0.75

Width of deck (ft); w_{deck} = 2.0

Add additional concrete for portions of walk above deck (CY); T_{walk} = (4 × 0.75 × 9 × 2) / 27 = **2.000**

TOTAL VOLUME OF DECK CONCRETE (CU YD); T_{PAR} **= ceiling (((2 × L_{D_EXP} × h_{deck} × w_{deck}) / 27) + T_{walk} , 1) = 14.000**

CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN (ALTERNATE 1)

*Item includes concrete parapets atop wingwalls.

Length of parapets on bridge/wings (ft); L_{BR} = 339.40 + 332.86 = **672.260**

Height of parapet (ft); h_{ped} = 2.667

Width of parapet (ft); w_{ped} = 1.0

TOTAL VOLUME OF PARAPET CONCRETE (CU YD); $T_{PAR} = \text{ceiling}((L_{BR} \times h_{ped} \times w_{ped}) / 27, 1) =$ **67.000**

CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN (ALTERNATE 2)

*Item includes concrete parapets atop wingwalls.

Length of parapets on bridge/wings (ft); L_{BR} = 339.40 + 332.86 = **672.260**

Height of parapet (ft); h_{ped} = 2.667

Width of parapet (ft); w_{aesth} = 1.33333333333

TOTAL VOLUME OF PARAPET CONCRETE (CU YD); $T_{PAR} = \text{ceiling}((L_{BR} \times h_{ped} \times w_{aesth}) / 27, 1) =$ **89.000**

ITEM 511 – CLASS QC1 CONCRETE, SUBSTRUCTURE

Portions of backwalls required to place expansion joints.

Length of deck along joint (ft); L_{D_EXP} = 96.0 / COS 24.12 = **105.18**

Thickness of BW (ft); h_{BW} = 1.17

Width of deck (ft); w_{BW} = 1.75

Add additional concrete for portions of walk at corners. Include with item:

T_{walk} = (4 x 1' x 9' x 1.75' W) / 27 = 3 CY (add to total below)

TOTAL VOLUME OF DECK CONCRETE (CU YD); $T_{PAR} = ceiling\ (2 \times L_{D\_EXP} \times h_{BW} \times w_{BW}) / 27, 1) =$ **19.00**

ITEM 512 – SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

Parapet on Bridge

Length parapets (ft); L_{rail} = 289.19 (RT) + 289.20 (LT) = 578.40

Sealing perimeter parapet (ft); P_{rail} = 2.67(2) + 1 + 1.57 + 2.3 (avg cantilever) = **10.21**

*Includes cantilever on outside fascia

Sealing area – on bridge (SF); $A_{BR\_rails} = (P_{rail} \times L_{BR})$ = **5905.46**

Parapet on Wingwalls

Length parapets (ft); L_{rail_WW} = 50.21 (RT) + 43.66 (LT) = 93.87

Sealing perimeter WW parapets (ft); P_{rail_ww} = 2.67 + 1 + 2.67 = **6.34**

*to top existing/wingwall

Sealing area – at wingwalls (SF); $A_{WW\_rails} = (P_{rail\_ww} \times L_{rail\_WW})$ = **595.14**

TOTAL Area at parapets (SY); T_{512_rails} = ceiling**(**(A_{ww_rails} + A_{BR_rails}) / 9, 1**)** = **723.00**

NOTE: To effectively seal backwalls, remove all end crossframes and replace – this will facilitate a good cleaning job and sealing of the backwalls. Replace ALL end crossframes.

Backwalls

Average elevation/top of abutments: FWD (north) = 767.89; REAR (south) = 771.24

Average elevation/top of abut/seats: FWD (north) = 762.25; REAR (south) = 765.35

*Consider from approach slab seat

Length / backwalls (ft); L_{FWD} = **108.58**

L_{REAR} = **107.08**

Sealing area – backwalls (SF); $A_{BW} = (5.64 \times L_{FWD}) + (5.89 \times L_{REAR})$ = **1243.10**

TOTAL Area at parapets (SY); T_{512_BW} = ceiling**(**(A_{BW}) / 9, 1**)** = **139.00**

Breastwalls:

Width (length) of breastwall; W_{BRW_FWD} = **108.58** W_{BRW_REAR} = **107.08**

GL – avg height at breastwall; GL = 3.25 ft

TOTAL Area – FWD (SF) (W_{BRW_FWD} x GL) = 352.89 SF

TOTAL Area – REAR (SF) (W_{BRW_REAR} x GL) = 348.01 SF

TOTAL Area at breastwalls (SY); T_{512_BRW} = ceiling **((**A-REAR **+** A-FWD) / 9, 1**) = 78.00**

TOTAL QUANTITY OF SEALING (SY); **$T_{512} = T_{512\_rails} + T_{512\_BW} + T_{512\_BRW}$ = 940.00**

ITEM SPECIAL – URETHANE TOP COAT

*Per PN 519 – on those areas that receive E-glass or carbon fiber wrap.

Length of pier cap;	L_{PC} = 106.25
Height (avg) of pier cap (ft);	h_{PC} = 3.98
Width of pier cap (ft);	W_{PC} = 3
Height (avg) of columns, P1 & P3 (ft);	h_C = 14.10
Height (avg) of columns, P2 (ft);	h_{C2} = 8.78
Column perimeter (ft);	C_A = 11

NOTE: Discount faces between NB & SB pier caps; cannot access (~3" width)

Area Pier Cap 1 of urethane top coat (SF);	$A_{PC1} = 2\times (h_{PC} \times L_{PC}) + 2\times (W_{PC} \times L_{PC}) + 2\times (W_{PC} \times h_{PC})$ = **1507.130**
Area pier 1 columns of urethane top coat (SF);	$A_{C1} = 3\times (h_C \times C_A)$ = **465.300**
Area Pier Cap 2 of urethane top coat (SF);	$A_{PC2} = A_{PC1}$ = **1507.130**
Area pier 2 columns of urethane top coat (SF);	$A_{C2} = 2\times (h_{C2} \times C_A)$ = **193.160**
Area Pier Cap 3 of urethane top coat (SF);	$A_{PC3} = A_{PC1}$ = **1507.130**
Area pier 3 columns of urethane top coat (SF);	$A_{C3} = 3\times (h_C \times C_A)$ = **465.300**

Total area of urethane top coat (SF); $A_{UTC} = A_{PC1} + A_{C1} + A_{PC2} + A_{C2} + A_{PC3} + A_{C3}$ =**5645.150**

TOTAL AREA OF URETHANE TOP COAT (SY); T_{512_UR} = ceiling (A_{UTC} / 9, 1) = 628.00

ITEM 513 – STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN

*All end crossframes

Intermediate crossframe (L 3x3x5/16) (lbs/ft); $W_{INT} = 6.10$
End crossframe (L 4x4x5/16) (lbs/ft); $W_{END} = 8.20$
Length/complete interior replaced (ft); $H_{INT} = 32.22$
Length/complete end replaced (ft); $H_{END} = 33.55$
Length/lower ∟interior replaced (ft); $H_{INT\_L} = 10.00$
Length/cross ∟interior replaced (ft); $H_{INT\_C} = 11.11$

Number complete intermediate replaced; $N_{int} = 5$
Number complete end replaced; $N_{end} = 18$
Number lower ∟ interior replaced; $N_{low} = 61$
Number cross ∟ interior replaced; $N_{cross} = 0$

Gusset PLs – end crossframes: (3) 8” x 10” x ⅜” plates;
Unit weight of steel plates (lb/ft^3); $W_{stl} = 490$
Connection plate thickness (in); $t_{pl} = 0.375$
Connection plate area (in^2); $A_{pl} = 80$
Connection plate weight (lbs); $W_{GP} = 3 \times W_{stl} \times ((A_{pl} \times t_{pl})/1728) =$ **25.521**

Length of interiors (ft); $L_{INT} = (H_{INT} \times N_{int}) + (H_{INT\_L} \times N_{low}) + (H_{INT\_C} \times N_{cross}) =$ **771.100**
Length of exteriors (ft); $L_{END} = (H_{END} \times N_{end}) =$ **603.900**

Weight of steel (lbs); $W_{ST} = (W_{INT} \times L_{INT}) + (W_{END} \times L_{END}) + (N_{end} \times W_{GP}) =$ **10115.065**

TOTAL WEIGHT OF STRUCTURAL STEEL (lbs); **W_{ST} = ceiling(W_{ST}, 1) = 10,116.000**

ITEM 516 – STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL

REAR ABUT = 107.08’ FWD ABUT = 108.58’

Length of EXP JT (ft); L_{EXP} = 215.66 / COS 24.12 = **237.00**

TOTAL EXPANSION JOINT (LF); **$T_{EXP} = L_{EXP} =$ 237.00**

ITEM 516 – BEARING DEVICE, ROCKER

REAR ABUTMENT (EA); E_{RA} = **11.00**

P1 (EA); E_{P1} = **0.00**

P2 – P3 (EA); E_{P2} = E_{P3} = **0.00**

FWD ABUTMENT (EA); E_{FA} = **11.00**

TOTAL NUMBER OF ROCKERS (EA); $\mathbf{R_{REPL}}$ **= ceiling(**E_{FA} + E_{RA}+ $P_{1\text{-}3}$**, 1) =** **22.00**

ITEM 516 – RESET BEARING

REAR ABUTMENT (EA);	$E_{RA} = 0$
P1 (EA);	$E_{P1} = 0$
P2 (EA);	$E_{P2} = 0$
P3 (EA);	$E_{P3} = 1$
FWD ABUTMENT (EA);	$E_{FA} = 0$

TOTAL NUMBER OF ROCKERS (EA); $\mathbf{R_{REPL} = ceiling(E_{FA} + E_{RA} + P_{1\text{-}3}, 1) = \underline{1.00}}$

ITEM 516 – JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

LUMP SUM

ITEM 519 – COMPOSITE FIBER WRAP SYSTEM

*Per PN 519 – on pier caps as required.

COMPOSITE FIBER WRAP SYSTEM: CARBON (CFRP)

Length of pier cap; L_{PC} = **106.250**
Height (avg) of pier cap (ft); h_{PC} = **3.980**
Width of pier cap (ft); W_{PC} = **3.000**
Height (avg) of columns, P1 & P3 (ft); h_C = **14.100**
Height (avg) of columns, P2 (ft); h_{C2} = **8.780**
Column perimeter (ft); C_A = **11.000**

NOTE: Discount faces between NB & SB pier caps; cannot access (~3" width)

Area Pier Cap 1 of urethane top coat (SF); $A_{PC1} = 2\times (h_{PC} \times L_{PC}) + 2\times (W_{PC} \times L_{PC}) + 2\times (W_{PC} \times h_{PC})$ = **1507.130**
Area Pier Cap 2 of urethane top coat (SF); $A_{PC2} = A_{PC1}$ = **1507.130**
Area Pier Cap 3 of urethane top coat (SF); $A_{PC3} = A_{PC1}$ = **1507.130**

Total area of composite carbon fiber wrap (SF); $A_{CARBON} = A_{PC1} + A_{PC2} + A_{PC3}$ = **4521.390**

TOTAL AREA OF COMPOSITE CARBON FIBER WRAP (SF); T_{519_CARBON} = ceiling(A_{CARBON}, 1) = 4522.000

COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP)

*Per PN 519 – on columns as required.

Area pier 1 columns of urethane top coat (SF); $A_{C1} = 3\times (h_C \times C_A)$ = **465.300**
Area pier 2 columns of urethane top coat (SF); $A_{C2} = 2\times (h_{C2} \times C_A)$ = **193.160**
Area pier 3 columns of urethane top coat (SF); $A_{C3} = 3\times (h_C \times C_A)$ = **465.300**

Total area of composite E-glass fiber wrap (SF); $A_{GLASS} = A_{C1} + A_{C2} + A_{C3}$ = **1123.760**

TOTAL AREA OF COMPOSITE E-GLASS FIBER WRAP (SF); T_{519_GLASS} = ceiling(A_{GLASS}, 1) = 1124.000

TOTAL AREA OF COMPOSITE FIBER WRAP (SF); T_{519_FIBER} = ceiling((T_{519_CARBON} + T_{519_GLASS}) , 1) = 5646.000

ITEM 519 – PATCHING CONCRETE STRUCTURE, AS PER PLAN

Include walks, curbs, median, abutment breastwalls, piers and backwalls

Per BDM C405.2.1 – add 25% to all quantities for final.

Area of abutment repairs (SF); A_{abut} = 64 + 48 = **112.000** x 1.25 = 140

Area of pier repairs (SF); A_{Piers} = 88 + 148 + 162 = **398.000** x 1.25 = 498

Area of curb repairs (SF); A_{curb} = 52 + 39 = **91.000** x 1.25 = 114

Area of walk repairs (SF); A_{walk} = 90 + 390 = **480.000** x 1.25 = 600

TOTAL CONCRETE PATCHING (SF); $\mathbf{P_{CONC} = ceiling(A_{abut} + A_{Piers} + A_{curb} + A_{walk}, 1) = \underline{1352.000}}$

ITEM 519 – PATCHING CONCRETE BRIDGE DECK – TYPE B

Per BDM C405.2.1 – add 25% to all quantities for final.

Area of deck repairs – field measured (ft); A_{deck} = 100 x 1.25 = 125

TOTAL PATCHING BRIDGE DECK (SY); **P_{BR} = ceiling((A_{deck}) / 9, 1) = 14.00**

ITEM 530 – SPECIAL STRUCTURE, MISC.: BRIDGE CLEANING

LUMP SUM

ITEM SPECIAL – STRUCTURE, MISC.: TIMBER SUB-DECKING

Place sub-decking over spans 2 & 3, plus additional 5 foot either side.

Spans (ft); S_{deck} = 87.75 + 91.25 + 10 = 189 ft

Spacing between girders = 94.5

Therefore, A_{SUB} = 189 x 94.5 = **17860.50**

TOTAL TIMBER SUB-DECK (SF); **T_{SUB} = ceiling((A_{SUB}), 1) = 17861.00**

ITEM SPECIAL – STRUCTURE, MISC.: BOTTOM OF DECK SPALL REMOVAL

Inspection shall take place in conjunction with sub-decking over spans 2 & 3, plus additional 5 foot either side.
Spans (ft); S_{deck} = 87.75 + 91.25 + 10 = 189 ft

Spacing between girders = 94.5

Therefore, A_{SUB} = 189 x 94.5 = **17860.50**

From observations in the field and markings on underside of deck, we assume 20% will be sounded. This is per note in plans that allows Field Engineer to spot areas as needed based on structural soundness and appearance.
So, A'_{SUB} = 17860.50 x 0.20 = **3572.10 (Use 3575 SF)**

TOTAL SOUNDING & SPALL REMOVAL (SF); T_{SUB} **= ceiling(**(A_{SUB})**, 1) = 3575.00**

ITEM 607 – VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN (ALTERNATE 1)

Length parapets (ft); L_{rail} = 337.82 + 331.28 = **669.100**

TOTAL VANDAL PROTECTION FENCE (LF); **T_{VPF} = ceiling(L_{rail}, 1) = 670.000**

ITEM 607 – FENCE MISC.: DECORATIVE FENCE (ALTERNATE 2)

Length parapets (ft); L_{aesth} = 343.86 + 336.59= **680.450**

TOTAL VANDAL PROTECTION FENCE (LF); **T_{VPF} = ceiling(L_{aesth}, 1) = 681.000**

UNDER LIGHTING QUANTITIES:

ITEM 625 – REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN

For use at each existing light pole ON BRIDGE.

3 LIGHTS BEING REMOVED AND REERECTED – EAST ONLY

TOTAL NUMBER LIGHTS (EA); R_L **= ceiling(2, 1) = 3.00**

ITEM 625 – STRUCTURE JUNCTION BOX

For use at each reerected light pole.

3 LIGHTS BEING REMOVED AND REERECTED

TOTAL NUMBER JUNCTION BOXES (EA); R_L **= ceiling(2, 1) = 3.00**

ITEM 625 – STRUCTURE GROUNDING SYSTEM

1 EACH - PER BDM

TOTAL GROUNDING SYSTEM (EA); R_L **= ceiling(2, 1) = 1.00**

ITEM 625 – CONDUIT, 2", 725.051, AS PER PLAN

The existing 2" conduit is buried on each end of the bridge beyond the parapets. It will run from end/parapet to end/parapet. Item shall include a contingency quantity as required to complete item, mostly for tie-ins at ends/bridge. A contingency of 10 LF at each pole will also be used for tie-ins at junction boxes and pole bases.

EAST PARAPET = BR LIMITS + 2x2 = 292' + 4' = 296 LF
WEST PARAPET = BR LIMITS + 2x2 = 292' + 4' = 296 LF
Contingency at pole = 10 LF x 3 = 30 LF

TOTAL = 622 LF

TOTAL LENGTH CONDUIT (LF); R_L **= ceiling(2, 1) = 630.00**

ITEM 625 – CONNECTION, FUSED PULL APART

Used in base of poles to for current carrying conductors.

RIGHT PARAPET = 2 poles = 2 EA
LEFT PARAPET = 1 pole = 1 EA

TOTAL = 3 EA

TOTAL FUSED CONN (EA); R_L **= ceiling(TOTAL, 1) = 3.00**

ITEM 625 – CONNECTION, UNFUSED PULL APART

Used in base of poles to for grounding conductors.

RIGHT PARAPET = 2 poles = 2 EA
LEFT PARAPET = 1 pole = 1 EA

TOTAL = 3 EA

TOTAL UNFUSED CONN (EA); R_L **= ceiling(TOTAL, 1) = 3.00**

ITEM 625 – CONNECTION, FUSED PULL APART

Used in ground box.

RIGHT PARAPET = 2 poles = 2 EA
LEFT PARAPET = 1 pole = 1 EA

TOTAL = 3 EA

TOTAL UNFUSED PERM (EA); R_L **= ceiling(TOTAL, 1) = 3.00**

ITEM 625 – NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE

Current carrying conductors in the feeder – from pull box to pul box.

Pull Boxes:
STA 71+85 (NE) AND STA 73+40 (NW)
STA 68+19 (SE) AND STA 67+86 (SW)

TOTAL = EAST, 366 LF & WEST, 554 LF = 920.00

TOTAL NO. 4 AWG (LF); R_L **= ceiling(TOTAL, 1) = 920.00**

ITEM 625 – NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE

Grond conductor – from pull box to pul box.

Pull Boxes:

STA 71+85 (NE) AND STA 73+40 (NW)

STA 68+19 (SE) AND STA 67+86 (SW)

TOTAL = EAST, 366 LF & WEST, 554 LF = 920.00

TOTAL NO. 6 AWG (LF); R_L **= ceiling(TOTAL, 1) = 920.00**

ITEM 625 – NO. 10 AWG POLE AND BRACKET

Cable that goes from junction box and up pole – taken from existing plans.

Stations from existing plans:

STA 68+90 (RT) **101 LF PROVIDED**

STA 70+69 (RT) **101 LF PROVIDED**

STA 69+80 (LT) **101 LF PROVIDED**

TOTAL = 101 + 101 + 101 = 303

TOTAL NO. 10 AWG (LF); R_L **= ceiling(TOTAL, 1) = 303.00**

ITEM 625 – REMOVAL OF LUMINAIRE AND REERECTION

The luminaire from each existing pole must be removed and stored per 625.21A in CMS.

PARAPET = 3 poles = 3 EA

TOTAL = 3 EA

TOTAL REMOVE/REERECT LUMINAIRE (EA); R_L **= ceiling(TOTAL, 1) = 3.00**

ITEM 625 – PULL BOX CLEANED

The pull box where the disconect and reconnect occurs must be cleaned.

1 LOCATION

TOTAL NUMBER PULL BOXES CLEANED (EA); R_L **= ceiling(2, 1) = 1.00**

ITEM 625 – MAINTAIN EXISTING LIGHTING

LUMP SUM

ITEM 625 – DISCONNECT CIRCUIT

Disconnect from existing circuit.

1 LOCATION

TOTAL NUMBER DISCONNECTIONS (EA); R_L **= ceiling(2, 1) = 1.00**

ITEM 625 – REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN

For use at each existing light pole ON BRIDGE.

3 LIGHTS BEING REMOVED AND REERECTED

TOTAL NUMBER LIGHTS (EA); R_L **= ceiling(2, 1) = 3.00**

ITEM 625 – REMOVAL OF LUMINAIRE AND REERECTION, AS PER PLAN

Item shall include all luminaires (UNDERPASS), conduit, adjacent junction boxes, supports, clamps and all appurtenances required to complete item.

P1: NORTH FACE @ 3 EACH = 3
P2: BOTH FACES @ 3 EACH = 6
P3: SOUTH FACE @ 3 EACH = 3

TOTAL NUMBER LUMINAIRES (EA); R_L **= ceiling(2, 1) = 12.00**

UNDER ROADWAY QUANTITIES:

ITEM 441 – ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448), AS PER PLAN

Use width between curbs at each abutment:

Length of PRJ; L_{PRJ} = 80.0 / COS(24.12) =**87.653**

Width of PRJ – only ~1.5 reqires patching (ft); W_{PRJ} = 1.5

Depth of PRJ – STD DWG (ft); D_{PRJ} = 1

TOTAL CY PRJ (CY); T_{441_PRJ} **= ceiling ((2×**L_{PRJ}**) ×** W_{PRJ} × D_{PRJ} **/ 27, 1) =** **10.000**

ITEM 606 – GUARDRAIL, TYPE MGS

Length guardrail – northwest; L_{NW} = 25

Length guardrail – northeast; L_{NE} = 25

Length guardrail – southwest; L_{SW} = 25

Length guardrail – southeast; L_{SE} = 50

TOTAL LENGTH MGS GUARDRAIL (FT); R_{BTA} **=** L_{NW} + L_{NE} + L_{SW} + L_{SE} **= 125.000**

ITEM 606 – ANCHOR ASSEMBLY, MGS TYPE E

TOTAL NUMBER OF ANCHOR ASSEMLIES (EA); R_E **= 2.00**

ITEM 606 – ANCHOR ASSEMBLY, MGS TYPE T

TOTAL NUMBER OF ANCHOR ASSEMLIES (EA); R_T **= 2.00**

ITEM 606 – MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1

Place on each corner

TOTAL NUMBER OF BTA'S (EA); R_{BTA} **= ceiling(1) = 4.00**